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COMPREHENSIVE WATERFRONT PLAN

A Technical Report of the
Division of Planning
City of Jersey City,
New Jersey

Dr. Paul T. Jordan, Mayor

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Division of Planning
City of Jersey City, N.J.

November, 1971

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INTRODUCTION

INTRODUCTION

As the Hudson River flows into New York Bay, the landscape adjoining the river is marked by extreme contrast. On the eastern shore is the powerful skyline of lower Manhattan's office buildings; to the west, the remnants of a once thriving industrial area now characterized by rotted piers, half submerged barges, abandoned rail lines and obsolete loft buildings.

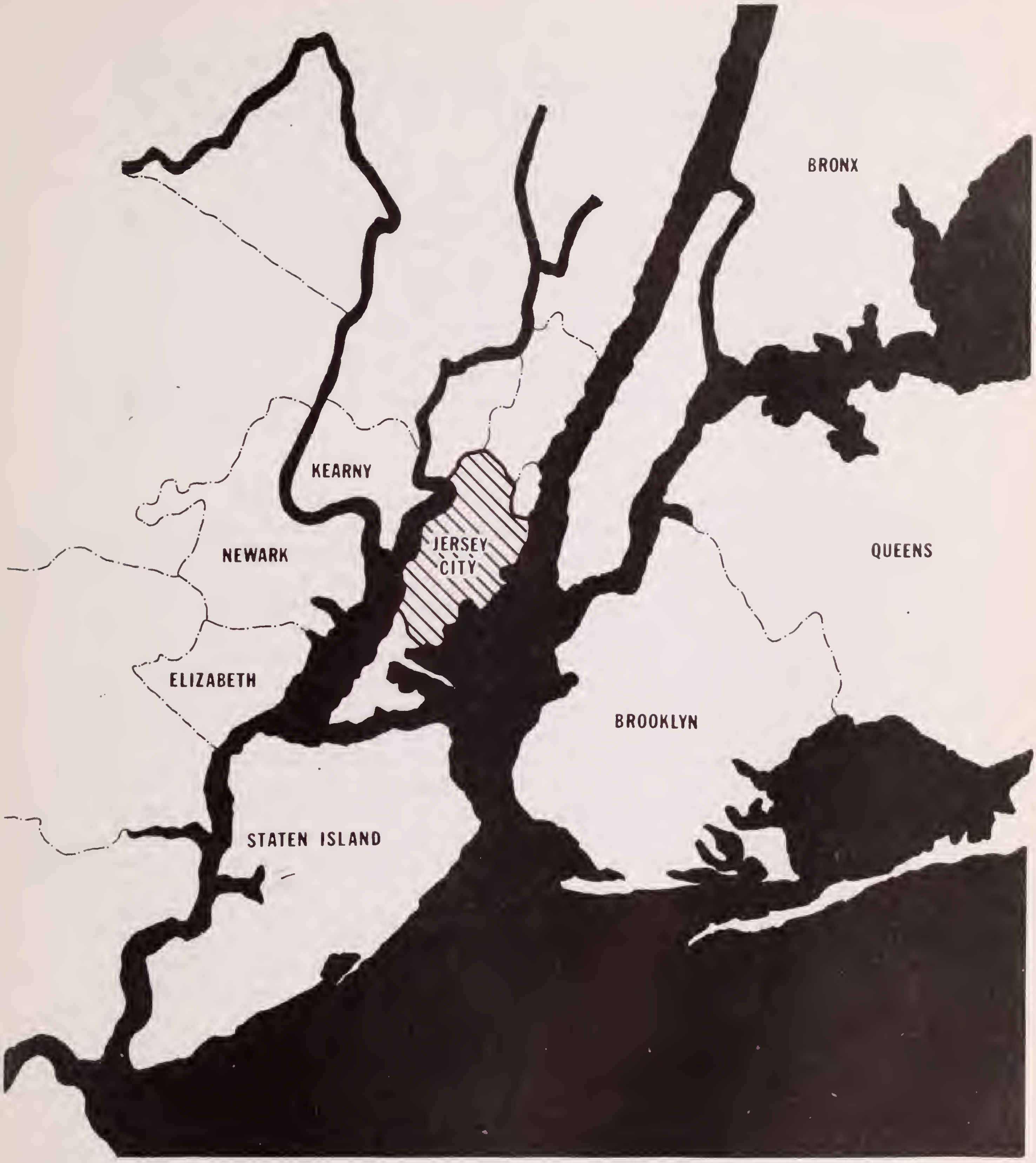
The City of Jersey City is presently unable to take full advantage of its strategically located waterfront. A proliferation of ownerships, lack of long range policy on the part of the railroads towards their property, efforts of speculative interests and, most important, the City's failure to take comprehensive action have resulted in less than optimal development on the waterfront. As this report will point out, the waterfront could provide as much as $37 million net in additional tax revenue for the deficit-ridden city. It could create employment for over 50,000 additional people as well as provide approximately 35,000 housing units. These efforts would drastically reduce severe shortages in housing and in job opportunities and at the same time eliminate the economic and functional obsolescence of the waterfront.

The program proposed is ambitious in scope, drawing on both private and public resources, but it is practical enough to be translatable into immediate realistic action. It recognizes the need for programs to be economically feasible and provide the city with reasonable ratables. To this end, the plan analyzes the potential cost and revenue to the developer as well as related costs and benefits, both monetary and otherwise, to the city based on each development proposal. Though it emphasizes the economic practicality, it also recognizes the need for the program to be socially responsible and to this end, deals with the need to provide housing and jobs in an area with severe deficiencies.

HISTORICAL PERSPECTIVE

The history of Jersey City, like the history of so many other cities, is directly linked to its location on the waterfront; for it was the waterfront, more specifically the Hudson River, which provided the main transportation link between the city and other centers of activity.

Much of Jersey City's expansion and its present land uses can be directly traced to its seven-mile frontage on Upper New York Bay and the Hudson River. The presence of both the river and Manhattan on the eastern shore defined Jersey City's traditional role as a transportation center and supplier of goods to the large



REGIONAL SETTING

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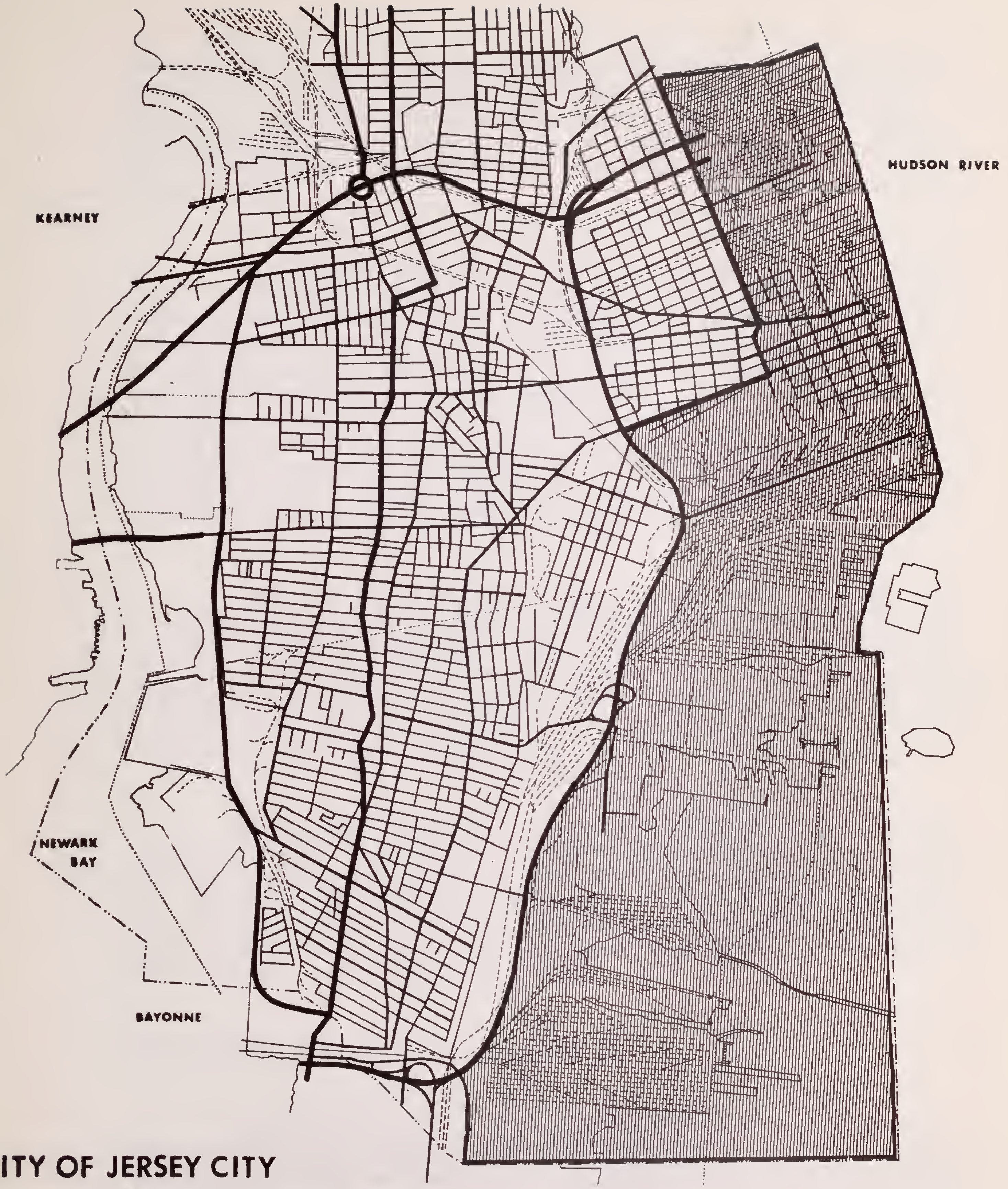
consumer across the Hudson. This was both an advantage and a disadvantage for it allowed for early economic expansion but at the same time, set the pattern for disorganized land use and future obsolescence.

Physical development dates back approximately 200 years to when the Jersey City waterfront became the departure point for the stagecoach to Philadelphia. Ferries carried people across the Hudson River to Paulus Hook, where they boarded the stagecoach for the overland trip to Philadelphia. In 1804 a New York syndicate purchased the present site of downtown Jersey City, their intention being to subdivide the land and sell individual lots. The project was abandoned shortly after its start when Alexander Hamilton, one of the sponsors, was killed in a duel with Aaron Burr. Thus by 1820, when the name of the area was changed from Paulus Hook to Jersey City, only 1,500 people lived there.

Three significant events in the 1830's enhanced the attractiveness of the newly formed city and caused it to grow. First, the states of New York and New Jersey reached an agreement on new boundaries; the middle of the Hudson would replace the low-water mark on the New Jersey side. The waterfront became available for development and this took on great significance with the emergence of New York City as a major manufacturing and commercial center. The first railroad tracks were laid in 1834, linking Jersey City and Newark and points south and west. When a deep cut (allowing steam locomotives to reach dockside) was completed through Bergen Hill in 1838 Jersey City's future seemed limitless. Now the city could be the transfer point for raw materials and finished goods moving in and out of Manhattan by barge to points south and west. Freight yards, terminals and piers were developed along the waterfront replacing summer homes of wealthy New Yorkers. Soon industry moved westward into Jersey City with the railroads. The most significant industries were Joseph Dixon's Steel Crucible Company and William Colgate's soap works. Other factories followed, along with more people. The Jersey City Spike and Bolt Works in the 1840's and was followed shortly by the New York Erie Railroad and the Adirondack Steel Company. At the same time, the Morris Canal was completed and Jersey City became a distribution center for Pennsylvania coal and western New Jersey iron.

By the 1860's there was a marked increase in the transportation of goods and passengers. Seven million people annually crossed the Hudson by ferry from Jersey City, and during the Civil War the city became a major departure point for transporting Union troops to Confederate battlefields.

As the demand for rail space increased, the contour of the Jersey City riverfront changed markedly. Railroads extended the shoreline east from



ITY OF JERSEY CITY

WATERFRONT STUDY AREA

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the site of the original settlement by dumping garbage and other fill into the Hudson River. Large companies moved to the riverfront and ocean-going ships of the Cunard and White Star Lines began to stop at Jersey City piers. In the 50 year period from 1860 to 1910, the population rose from 29,000 to 268,000 as immigrants came to work in Jersey City's rail and industrial enterprises.

By the 1920's Jersey City's growth had reached its zenith with a population of approximately 320,000 persons. From that point on, population increases were to lag behind other parts of the metropolitan area. The lag in population growth was simultaneous with a period of accelerated land use obsolescence along the waterfront. Trucks replaced railroad cars as prominent freight transporters; one story industrial complexes were constructed in outlying areas, resulting in the abandonment of inefficient loft buildings. Increased auto ownership and highway construction accelerated the movement of people and industry to the suburbs. A once-thriving port became inefficient as shipping routes changed and pier facilities were no longer able to handle larger ships and new techniques for water transport.

Thus by 1970 the tonnage of freight moving in and out of the Jersey City harbor had been reduced from its peak by 60 percent, direct railroad activity had declined 70 percent and related industrial activity had been markedly reduced. At the same time the amount of vacant waterfront land sharply increased from 8 percent in 1925 to 55 percent in 1970. As a result of the severe decline along the waterfront, revenues to the city had ebbed from a peak of $25 million in 1935 to $8 million in 1970 in constant dollars.

Jersey City's waterfront is today characterized by rotted piers, dilapidated buildings, and hundreds of miles of unused railroad tracks, all of which once served a vital river-oriented function; but now go unused year after year. The piers, the presently dilapidated factory and commercial buildings lining the waterfront and the river and its channels--now silted and dotted with wrecked barges--no longer possess the meaning and relationship that they once had to each other and to the city as a whole.

THE FUTURE OF THE JERSEY CITY WATERFRONT

The relationship of the city to the river has changed. To meet the requirements of future growth in Jersey City, the proposed planning program establishes a framework for eliminating the worst elements of riverfront activity and neglect and for creating an essentially new relationship between the city and the river.

It is proposed that the pier area extending from the existing bulkhead line to the pierline be filled and that this landfill area as well as adjacent deteriorated and under-utilized areas be developed for commercial, residential and industrial uses. The planning program calls for the development of a series of waterfront plazas and a state park, all of which would be connected by a waterfront esplanade providing public access to recreation areas, marinas and the new residential community.

Thus the function and relationship of the river to the city will have changed; where once the river served the need for physical survival, it will now take on new meaning as a center for recreation and community development as well as improve the fiscal plight of the city and its overall appearance.

EXISTING LAND USES

BASIS FOR A DEVELOPMENT PLAN

Before any realistic plan for the Jersey City waterfront can be formulated, an in-depth study must be made of those major factors extant on the waterfront which will influence, both positively and negatively, future development and redevelopment.

Perhaps the most influential of the several factors is existing land use. Each major type and major location of land use must be analyzed in terms of efficiency of operation, revenue to the city, employment, future growth potential, and various related social and economic factors. The ability of the city to undertake waterfront redevelopment depends in large part on the willingness and flexibility of certain major land users to relocate and/or consolidate much of their operations and at the same time release unneeded lands for public or private redevelopment.

Other major factors which must be examined include the existing transportation network, existing utilities systems, and soil conditions and limitations.

Finally, existing development plans and programs for the waterfront must be examined. These include projects now under construction, such as Port Jersey, projects in advanced planning stages, such as new office building construction at Exchange Place, and projects in preliminary planning, such as Liberty State Park.

Existing Land Use

The predominant land use on the Jersey City waterfront is industrial, including railroads, manufacturing, and warehousing. Historically, most of these land uses have been directly or indirectly related to the water, but the rapid decline of the railroads in recent years has reversed this trend.

The chances for substantive and economically beneficial redevelopment on the waterfront depend to a great extent upon how the land uses reflect and foresee the rapidly advancing technology and methods of transfer, storage, and transportation of goods and services.

RAILROADS

Since 1834, when the first railroads were built in Jersey City, the waterfront has been a major terminal and port for the railroads. At the height of railroad activity in the City, as many as 8 major trunk lines and branch lines used the waterfront for passenger terminals, carload interchange with each other, and lighterage and carfloating operations to points throughout the Port of New York.

The Port of New York Authority has been compiling railroad freight statistics since 1933. Prior to that date factual information was available from the individual freight station records of the major railroads that serve the Port of New York. The general experience in Jersey City, Hudson County, and New Jersey follows that of the entire Port of New York, as shown in Tables I and II.

Definitions used in the two tables include:

Tidewater Coal - coal which arrives in the Port District by rail, is loaded on a barge, and is transported to a river-side facility.

Team Track Coal - arrives in the Port District by rail, and is distributed to local dealers for public use.

Local Freight - includes all railroad freight originating in, destined to, or consumed within the Port District.

TABLE I
PERCENTAGE LOSS IN RAILROAD FREIGHT TONNAGES, 1925 - 1970

CLASSIFICATION	NEW JERSEY SIDE	PORT OF NEW YORK
Coal		
Tidewater	70.0	60.8
Team Track	90.4	87.5
Perishables	62.2	62.0
Merchandise		
Car Load	33.3	31.2
Less Than Car Load	99.8	99.6

Source: Central Research and Statistics Division, Port of New York Authority.

TABLE II

PERCENTAGE LOSS IN RAILROAD FREIGHT TONNAGES,
HUDSON COUNTY, 1925 - 1970

CLASSIFICATION	HUDSON COUNTY	N.J. SIDE OF PORT
Local Freight	65.1	53.5
Carload Freight	+ 4.4	13.3
Less than Carload Freight	100.0	99.8

Tables I and II indicate that all major categories of railroad freight had substantial losses in tonnage both for the total Port District, the New Jersey side and Hudson County. The greatest loss was in less-than-carload tonnage of non-perishable merchandise which fell by nearly 100 percent in the period analyzed; actual figures show a drop for New Jersey from 406,000 short tons in 1950 to 1,000 short tons in 1964.

The reasons for the severe decline in railroad activity include the emergence of the truck, possessing extreme fleasibility in moving goods, the construction of a national network of highways connecting points of production and consumption efficiently. Railroad losses were increased not only by trucking competition but also by increased internal inefficiency. To improve methods of operation and efficiency the railroads have increasingly turned to trailer-on flat car (TOFC) or container-on flat car (COFC) operations. However, of the four major railroads serving the Jersey City waterfront, only the Central Railroad of New Jersey has such an operational loading-unloading facility on the waterfront, although the Lehigh Valley has an unused one on Johnston Avenue. Most of the TOFC-COFC facilities are new, and have been built in other areas of Hudson County, including Secaucus and Weehawken.

Another factor, and an important one, which has resulted in decreased use of the Jersey City waterfront for railroad purposes, has been the various corporate mergers of the railroads. The first major one was that of the Erie Railroad and the Delaware, Lackawanna, and Western Railroad, forming what is now the Erie-Lackawanna Railway. The most important effect of this merger was the substantial decrease in freight traffic along the former Erie main line, which entered Jersey City from the Meadows, traveling along the depressed highway to the yards in the vicinity of Pavonia Avenue on the waterfront. This also resulted in the complete elimination of Erie passenger service into Jersey City; these trains were diverted into the Hoboken passenger terminal of the former Lackawanna Railroad. The Erie Railroad Station at the foot of Pavonia Avenue was abandoned, as were the extensive passenger service shops and maintenance facilities.

A second major railroad merger which has affected Jersey City has been that of the Pennsylvania Railroad and the New York Central System to form the Penn Central Transportation Company. Jersey City has historically been the major freight terminal for the Pennsylvania Railroad, New York region, and prior to the opening of the Hudson River Tunnel at North Bergen in 1913, was the major passenger terminal as well. The New York Central never played a major role in Jersey City, but served the waterfront indirectly through a subsidiary, the New Jersey Connecting Railroad, which linked the Central Railroad of New Jersey's waterfront lines with the New York Central yards at Weehawken and West New York. The Pennsylvania reached the waterfront at two different points. The major line entered the city near the Bayonne city line, terminating at the extensive Greenville Yards. The other line entered from Kearny terminating at the Harsimus Cove Yard. Both yards have seen a drastic decline in activity.

Historically, perhaps the most important railroad to the city in terms of employment, taxes, and general economic benefits has been the Central Railroad of New Jersey. The Jersey Central enters Hudson County at the southern tip of Bayonne, swings north to Jersey City and parallels the New Jersey Turnpike to its terminals and yards in the area south of the Morris Canal Basin. Jersey City has always been the major eastern terminal for this railroad, which has had its freight classification yards, carfloat and lighterage operations, shops and passenger station on the waterfront. The passenger station at the foot of Johnston Avenue served commuter and long distance runs of the Jersey Central, Reading, and Baltimore and Ohio railroads until 1967, when the ferries to Manhattan were discontinued and remaining passenger service was transferred to the PATH connection at Pennsylvania Station, Newark.

The fourth and last railroad serving the Jersey City waterfront is the Lehigh Valley, which is owned, although not controlled, by the Penn Central. This road enters the City on the Penn Central's Greenville Bridge, has a major yard at Claremont Terminal (adjacent to Greenville Yard), and proceeds northward , paralleling the Jersey Central, to a second terminal north of Johnston Avenue, beside the Morris Canal Basin.

Table III presents the total acreage, by class, of each of the major railroads in Jersey City. With the exception of the Erie-Lackawanna's Meadows Yards, almost all the Class II property[1] is located in the waterfront study area. Table IV shows the relative size of each.

TABLE III
RAILROAD PROPERTY IN JERSEY CITY (1970)*

RAILROAD	CLASS I ACREAGE	CLASS II ACREAGE	TOTAL
Penn Central	81.475	548.534	630.009
Jersey Central	80.523	362.607	443.130
Erie-Lackawanna	132.911	476.669	609.580
Lehigh Valley	143.129	175.010	318.139
TOTAL	438.038	1,562.820	2,000.858

Source: Public Utility Tax Bureau, State of New Jersey.

*Does not include the 8.601 acres of the New York, Susquehanna, and Western, none of which is located in the study area.

TABLE IV
PERCENTAGES OF RAILROAD PROPERTY IN JERSEY CITY AND (PERCENT OF TOTAL CLASS) (1970)*

RAILROAD	% CLASS I	% CLASS II	TOTAL
Penn Central	12.9(18.6)	87.1(35.1)	100.0(31.5)
Jersey Central	18.2(18.4)	81.8(23.2)	100.0(22.1)
Erie Lackawanna	21.8(30.3)	78.2(30.5)	100.0(30.5)
Lehigh Valley	45.0(32.7)	55.0(11.2)	100.0(15.9)
(TOTAL)	(100.0)	(100.0)	(100.0)

Source: Public Utility Tax Bureau, State of New Jersey

*Does not include the New York, Susquehanna, and Western.

Thus, the Penn Central is largest in terms of total railroad land area in the City, followed respectively by the Erie-Lackawanna, Jersey Central, and Lehigh Valley. The same order is true for Class II acreage. The Lehigh Valley has the most Class I property, followed by the Erie-Lackawanna, Penn Central, and Jersey Central, respectively.

Economic Value to the City

The economic value of the railroads to the City manifests itself in several ways: employment payrolls, spin-off to other industries and businesses, and taxes to the City. For municipal purposes the tax situation is most important. The fact that the railroads generally pay less in property taxes than private property owners is partially offset by the fact that the railroads can attract high

industrial ratables to track-side properties.

The railroads are taxed only on Class II and III properties. Class I property, which consists of the main and branch lines of the railroads, are tax-exempt. Class II property is all non-Class I property which is used for railroad purposes, such as sidings and spur lines, freight and passenger yards, shops, towers, and similar uses. Class III property is railroad-owned but not used for railroad purposes, such as property which is leased to a private company; there is a negligible amount of this property in the study area. The improvements on Class II property are subject to taxation as well.

Railroad taxes are not collected by the City of Jersey City, nor is the property assessed by the City. Rather, the property is assessed by the New Jersey Public Utility Tax Bureau. Railroad taxes are assessed only against Class II railroad property at a rate of $4.75 per hundred dollars of true valuation. These taxes are collected by the New Jersey Department of the Treasury's Division of Taxation, for State uses, and hence go into the State treasury. The City's income from the railroads is therefore received as a total payment from the State of replacement taxes for Class II railroad taxes. The amount of State aid in this form varies each year. Basically, the State aid consists of the 1966 Class II taxes, adjusted to reflect physical changes in the Class II property, plus a portion of the difference between the 1965 and 1966 Class II property taxes.

For example, in 1967 Jersey City received the 1966 Class II taxes, as adjusted, plus 100 percent of the difference between the 1965 Class II taxes and the the 1966 Class II taxes. In 1968 the City received the 1966 Class II taxes, as adjusted, plus 90 percent of the difference between the 1965-1966 Class II taxes. Hence, the difference between the 1965 and 1966 Class II taxes diminishes by 10 percent each year. This means that by 1977, the City will receive only the equivalent of the 1966 Class II taxes, as adjusted.

Three of the four railroads serving the waterfront have filed for reorganization under the Bankruptcy Act, and are being administered under the supervision of the Federal Courts; these railroads are the Penn Central, the Lehigh Valley, and the Central Railroad of New Jersey. However, the fact that the railroads may not be able to pay their taxes to the State does not affect the payment of replacement taxes to the municipalities.

Table V shows the appropriate assessed value of the Class II railroad property and improvements on the Jersey City Waterfront; Table VI converts the figures to an approximate per acre assessment basis.

The assessed value figures are shown primarily to indicate the total worth, as assessed by the State, of railroad Class II property in 1971. As mentioned previously, the formula for determining the amount of taxes due from the railroads is complicated, and is not directly related to the amount the State collects from the railroads. Table VII shows the amount of State aid the City receives in the form of replacement taxes.

TABLE V
ASSESSMENTS OF JERSEY CITY WATERFRONT RAILROAD PROPERTY (CLASS II) - 1971

Railroad	Assessed Value Acreage	Assessed Value Improvements	Total
PENN CENTRAL	$12,834,701	$ 7,216,855	$20,051,556
JERSEY CENTRAL	7,480,295	4,354,382	11,834,677
ERIE-LACKAWANNA	11,765,152	5,424,713	17,189,865
LEHIGH VALLEY	3,315,277	2,021,905	5,337,182
TOTAL	$35,395,425	$19,017,855	$54,413,280

Source: Tax Maps and Assessment Records, Public Utility Tax Bureau, State of New Jersey.

TABLE VI
AVERAGE PER-ACRE ASSESSED VALUE OF LAND AND IMPROVEMENTS - 1971

Railroad	Total Waterfront Class II Acreage	Average Val. Land	Average Val. Improvements	Total
PENN CENTRAL	496	$25,876	$14,550	$40,426
JERSEY CENTRAL	359	20,836	12,129	32,965
ERIE-LACKAWANNA	222	52,996	24,436	77,432
LEHIGH VALLEY	173	19,163	11,687	30,850
TOTAL	1,250	$28,316	$15,214	$43,530

Source: Derived from Table V.

TABLE VII
STATE AID-RAILROADS TAX REVENUE TO
JERSEY CITY

YEAR	AMOUNT
1967	$ 6,565,031.89
1968	$ 5,462,001.81
1969	$ 5,154,176.14
1970	$ 4,798,675.68
1971 (anticipated)	$ 4,611,826.89

Source: Local Municipal Budgets, City of Jersey City.

As can be seen from Table VII, the amount of State revenue is decreasing annually, but the formula provides for this decrease until such point as the aid stabilizes at the 1966 level, which will be in 1977. Because of this formula for determining the indirect payment of railroad taxes, it is not possible to attribute any part of the aid to a particular railroad. However, since for 1971 there are 1,562.820 acres of taxable Class II railroad property in all of Jersey City, and since the 1971 state aid will total $4,611,826.89, it can be stated that one acre of Class II property provides $2,951 in annual tax revenues to the City.

Current Railroad Waterfront Operations

PENN CENTRAL

Penn Central operations are concentrated at two major waterfront locations: Greenville Yard and Harsimus Cove. The Greenville Yard, located at the southern boundary of the waterfront study area, is currently the less active of the two. The major activities at Greenville are the unloading, storage, and transfer to barges of structural steel for new construction in lower Manhattan, primarily for the World Trade Center. The float bridges and lighterage facilities are idle. Penn Central officials indicate that, if it were clearly to the Penn Central's economic advantage, they would be willing to release most of the Greenville Yard for industrial development, retaining only sufficient trackage to adequately serve the new containership operation at Port Jersey, adjacent on the south to Greenville Yard.

The Penn Central is presently developing a site plan for new industrial development at their Harsimus Cove facility, in the area running north from Second Street, and east of Henderson Street. Dilapidated and vacant structures

will be razed and replaced by modern and more efficient facilities. One of the principal new tenants is Chicago Shippers, a major freight-forwarding operation. The railroad hopes to attract other forwarders to Harsimus Cove from their increasingly costly facilities in downtown New York.

The Penn Central employs 779 residents of Jersey City, approximately 500 of whom live in the City and work elsewhere. Approximate wages paid to Jersey City residents in 1970 were $7,695,000.

ERIE-LACKAWANNA RAILWAY

The Erie-Lackawanna Railway waterfront operations in Jersey City are concentrated in the area east of Henderson Street north from Seventh Street to the Hoboken city line. The area at the city line consists of the approach tracks to the Hoboken passenger terminal, as well as passenger car and passenger locomotive storage yards and shops. The very limited amount of car float and lighterage operations are performed in the area to the south of the passenger yards. The Erie-Lackawanna's primary freight yards are located in the former Erie Railroad's passenger and freight yards north of Pavonia Avenue. The railroad is presently developing a new car - truck unloading and storage facility on this site, and is demolishing remnants of the Erie passenger yard and shops to allow for expansion of this activity.

Erie-Lackawanna officials feel that the ground area of the waterfront should be devoted exclusively to industrial uses, and are consequently not interested in selling any of the railroads waterfront property. While they have not developed any definitive plans for air-right development of their property, they have spoken to various interested parties. The railroad would like to take an active part in air-right development, rather than leasing or selling these rights, although their equity in such an arrangement would consist only of contributing the air-rights, rather than any actual cash investment. No consolidation of activities or property is contemplated by the railroad in the foreseeable future, but any land so released in the future would be first considered for other railroad usage. The Erie-Lackawanna is the only railroad along the waterfront that is not bankrupt.

LEHIGH VALLEY RAILROAD

Operations of the Lehigh Valley Railroad are concentrated at two major locations in the City: Claremont Terminal, located between the Greenville Yard and the Caven Point Army Terminal, and Johnston Avenue, adjacent to the Morris Canal Basin.

The major function of the Claremont Terminal is railroad interchange traffic with the Central Railroad of New Jersey; in addition, there is some bulk steel storage for lower Manhattan construction. There are no longer lighterage at Claremont, or elsewhere in Jersey City, and Claremont is not equipped with car float bridges.

The Johnston Avenue trackage serves some local industries, carfloat operations, and an inactive TOFC/COFC facility.

In addition, the National Docks Railway, a wholly-owned subsidiary of the Lehigh Valley, provides a freight interchange connection between the Jersey Central, in Jersey City, and the Penn Central at Weehawken.

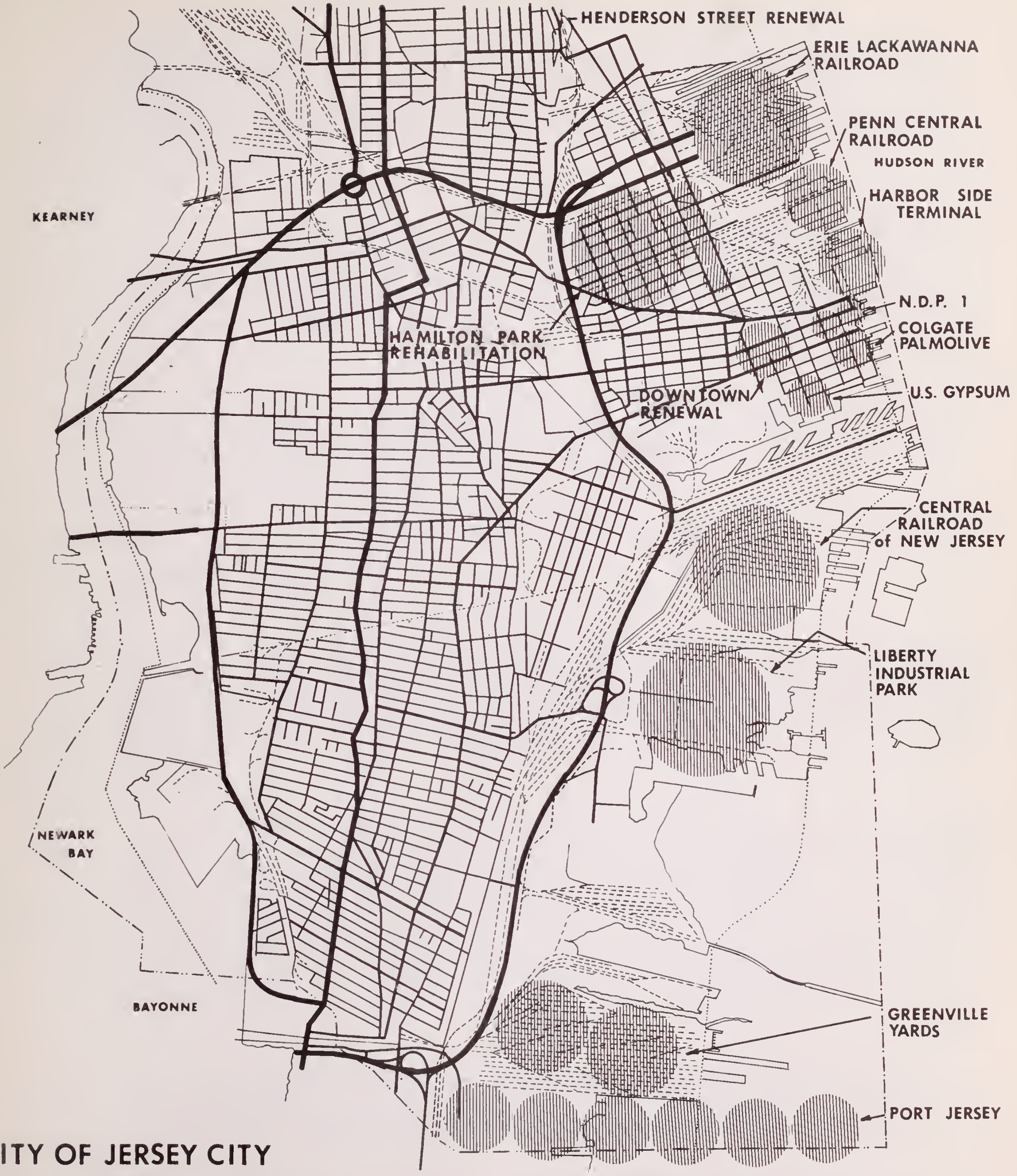
Lehigh Valley employs approximately 147 persons in their local operations, with an annual payroll in excess of $1,300,000.

Because of the railroad's financial condition, and because of decreasing freight tonnage, Lehigh Valley officials seem amenable to the disposition of excess Jersey City property. They would be willing to sell their Johnston Avenue property if suitable arrangements could be made to relocate their float bridge operations. The railroad is in no position to finance any redevelopment of its property, but would be willing to sell or lease land or air-rights in the Johnston Avenue yards. It is also interested in promoting development of the vacated Caven Point Army Terminal for industrial uses, since the Lehigh Valley has the only rail access to the tract.

Even though the Lehigh Valley is owned "on paper" by the Penn Central, the latter will not be able, in the foreseeable future, to mandate a development policy for the Lehigh Valley. Since both roads have filed for reorganization under the Bankruptcy Act, they are both under the jurisdiction of the Federal Court in Philadelphia.

CENTRAL RAILROAD COMPANY OF NEW JERSEY

The Central Railroad Company of New Jersey has about 106 miles of trackage in Jersey City, all of which is within the waterfront study area. Most of the trackage is in the yards extending south from the Morris Canal Basin. All of this area was filled from the original shoreline to provide the eastern, and only port, terminal for the Jersey Central. Major operations in these yards consist of



ITY OF JERSEY CITY

WATERFRONT ACTIVITY CENTERS

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carfloating facilities near the abandoned passenger terminal, a recently deactivated coal dumping facility at Pier 18, and a TOFC/COFC operation near Johnston Avenue. Other yards are used for general freight and storage. About 500 persons are employed in the Jersey City area, with 1970 wages approximating $4,000,000.

At the present time, officials of the Jersey Central are not prepared to make any statement about the release of any of their property for redevelopment for other uses. It should be noted, however, that in the past several large tracts have been taken by the State for Liberty State Park under the State's Green Acres Program.

In the unlikely event that the Jersey Central, which is now being operated by a Court-appointed trustee, should be absorbed by merger into a rail system having other port access, the railroad might be able to relinquish major portions of its property.

INDUSTRIAL ACTIVITY

Industrial development along the Jersey City waterfront has traditionally been based on one overriding factor: transportation. From its earliest days, when the city was a gateway to an extensive, statewide canal system, to present day, multi-modal commerce, transportation has been a direct contributor to both prosperity and stagnation in the city.

The canal system was rapidly made obsolete by the advent of the steam engine. Thus, the railroads formed the city's earliest, and for most of the city's life, the most significant, major industry. Starting around 1834, the railroads began to develop the Jersey City waterfront, which became a major eastern passenger and freight terminus. Most of the railroad activity along the waterfront was directed toward port activity, but a significant amount of railroad support activity also existed. This included facilities for locomotive and rolling stock service and repair, sleeping car service, and local freight operations.

Water and rail access provided the incentive for other industries which depended on one or both of these forms of transportation. The great majority of the waterfront land, however, was occupied by the railroads.

Present industrial development on the waterfront ranges from heavy, sometimes noxious, uses to very light manufacturing and warehouse uses.

Development is scattered, with the heaviest industrial concentration being found from the Morris Canal Basin north to the Hoboken city line.

Port-related Development

A substantial, although decreasing, proportion of waterfront development is related directly to port activity. There are three major general cargo piers on the Hudson River: Piers D and F, located at Harborside Terminal and the Holland Tunnel Pier, Pier 9, which is presently inactive. The principal tenants of Piers D and F are Refrigerated Express Lines (A/Asia) Pty., Ltd., Spanish Line, and China Union Lines, Ltd. The Harborside Terminal facilities were built in the early 1930's by the Pennsylvania Railroad, and provided warehousing and shipping facilities with direct access to the Pennsylvania's Harsimus Cove branch. The terminal was operated by the Railroad until 1955, when it was sold to private interests. The entire complex contains 2,500,000 square feet of space, leaving the remainder in office and light manufacturing space. Only the pier operations are port-related; they have been able to remain competitive with more modern piers elsewhere in the port because Harborside provides two of the few refrigerated piers. Their success is also due to the location of the terminal in relation to rapid transit, the New Jersey Turnpike, and the Holland Tunnel, and to the maneuvering space in the Hudson River, compared to the narrow channel to Port Newark-Port Elizabeth. Expansion of Harborside in the foreseeable future is not likely, since the space needed is held by the Penn Central Railroad for its own use.

There are also a number of specialized harbor facilities along the waterfront. The railroads have lighterage and carfloat facilities, many of which are vacant or abandoned. The Central Railroad of New Jersey until recently maintained an automated coal dumper in its yard south of the old passenger station adjacent to its lighterage piers. Several scrap metal operations maintain barge moorings along the southern portion of the waterfront. Adjacent to the Statue of Liberty, Tankport Terminals owns a deteriorated fuel pier which extends over a mile into the harbor.

At the present time, the conditions of most pier and port facilities along the waterfront are poor. The area is characterized by many dilapidated, rotting, and obsolete piers. In addition, much of the former docking and general anchorage space is now unusable because of the wreckage and abandonment of old ferries, tugboats, barges, and lighters.

Because most of Jersey City's waterfront land has been tied up in idle or marginally used railroad property, the City has not, until recently, been able

to follow the most recent trends in port activity: the containership market. Under construction at the present time, however, is a 17 berth container port, which is being developed by the Port Jersey Corporation. The complex is located on a 410 acre site (of which 310 will be landfill) astride the Jersey City-Bayonne line, adjacent to the Penn Central's Greenville Yard. It will be composed of warehousing and light industrial plants as well as the containerized shipping operations. The site will be served by the Penn Central Railroad and is adjacent to the New Jersey Turnpike.

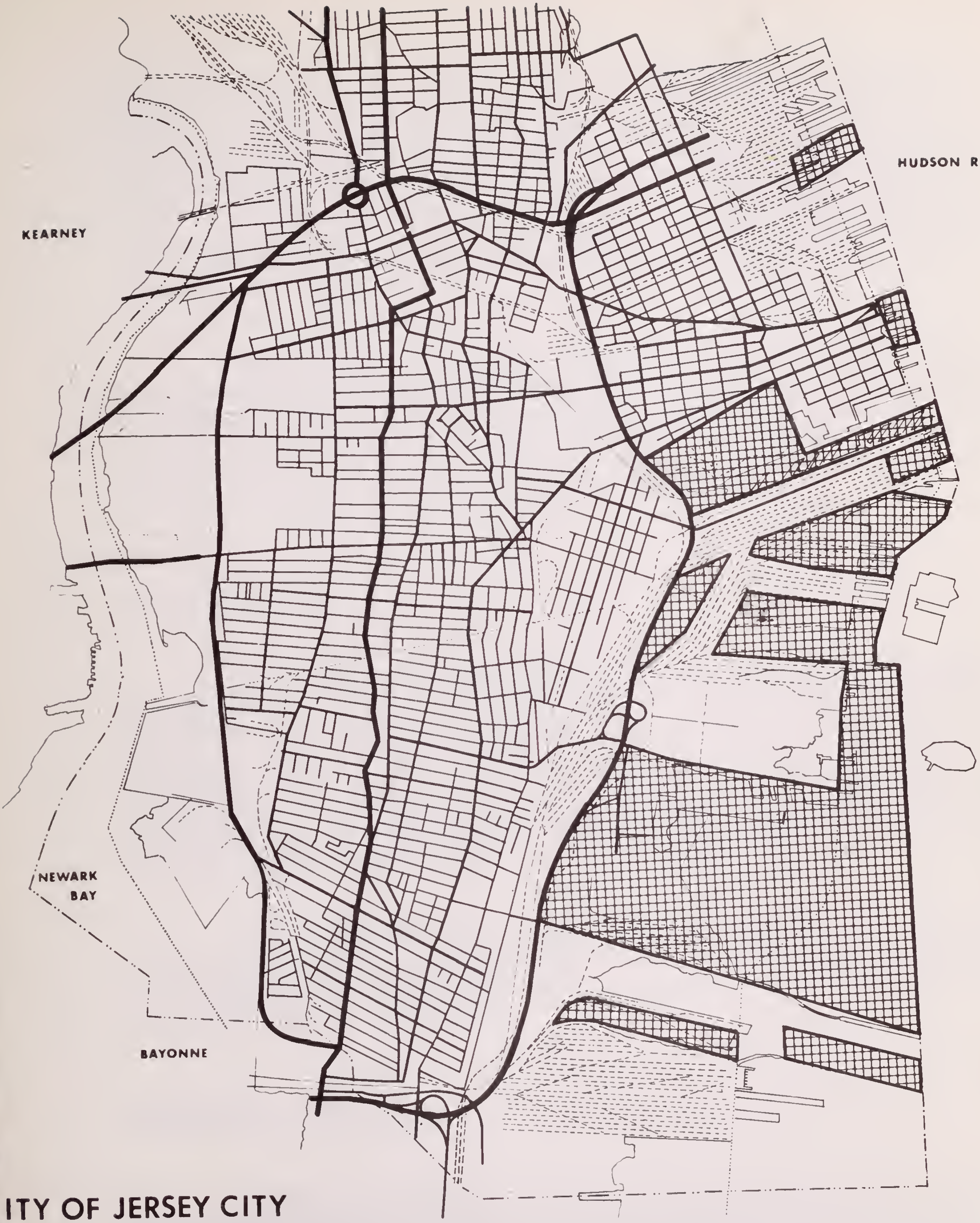
Other Industrial Development

Those industries which are directly related to Port activities are relatively few in number. Other types of industry, ranging from product fabrication to warehousing, are more significant in terms of taxes, production, and employment.

The largest employer on the waterfront, and in the city, is the Colgate Palmolive Company with 2,300 employees, followed by United States Gypsum and Paris Cosmetics, 250 employees each, and Onyx Chemical employing 202 persons. There are approximately 40 industries, including warehouses, in the waterfront study area, with a total employment in excess of 5,000. Many of these industries are quite small, with from 10 to 40 employees. A number of them are located in the Harborside Terminal at 34 Exchange Place; most of them deal in such products as dry goods, furs, and cosmetics. There are a number of similar industries in the area between Henderson Street and the River, from Exchange Place north to Hoboken. Several meat and food preparation concerns and wholesale florists are located near the Holland Tunnel approach.

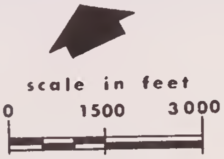
Several larger and more intensive industries are located adjacent to, and on both sides of, the Morris Canal Basin. Schiavone-Bonomo Corporation, a scrap metal operation employing 190 persons, and United States Gypsum are located north of the Basin; Onyx Chemical Company is located to the south on Johnston Avenue. Several boat repair and dry dock companies are also located along the Basin.

Because the railroads controlled much of the waterfront until recent years, there has not been much opportunity for extensive redevelopment. One notable exception has been the creation of Liberty Industrial Park , which is located on the long-vacant Black Tom site. The land was owned by the city, which sold it for private development through public auction. The project area encompasses approximately 180 acres, part of which was filled hydraulically



CITY OF JERSEY CITY

VACANT LAND



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using sand and some silt. Facilities in the Industrial Park were built by the developer to the specifications of prospective tenants. Roads and utilities were also provided by the developer. When completed, the park will have approximately 1.6 million square feet of space, and will ultimately provide employment for over 1,300 persons. The site is well served by all forms of transportation, including the Lehigh Valley and Jersey Central railroads, and the New Jersey Turnpike; if the need arises, there is also space for wharf development. Tenants in the park range from variety store warehouses to light manufacturers.

Although there may be some question as to whether this type of use is the best for the land, and providing maximum benefit to the City in terms of employment and taxes, the success of Liberty Industrial Park demonstrates that there is a ready market for this type of use. The developers attribute their success to three major factors: geographic location, proximity to a large and diverse labor market, and location in a free trucking zone.[2]

Expansion Potential

The potential for industrial expansion along the waterfront depends on several factors, each acting more or less independent of the others. Perhaps the most crucial factor is the willingness of the railroads to give up their excess land, of which there is a substantial amount, in order to allow private development to take place. Several of the railroads have indicated that they may do this. Most of the property available for industrial use lies south of the Basin, and most of it, once released by the railroads, must be stabilized for building before development can commence.

The second major factor is the cost of site preparation. In most cases, tracks and other railroad equipment must be removed, and much of the land must be partially or completely filled. Finally, any further port or wharf development will require extensive dredging.

RESIDENTIAL DEVELOPMENT

There is no residential development in the waterfront study area south of the Morris Canal Basin, and since the boundary of the study area lies so close to the riverfront, very little residential development to the north as well.

The two concentrations in the northern portion are in the areas bounded by (1) Henderson Street, Railraod Avenue, Warren Street, and Second Street, and (2) Henderson Street, Seventh Street, Provost Street, and Ninth Street. Approximately 385 dwelling units are located in 87 structures in both of these areas; of the 87 structures, almost half contain both residential and commercial tenants.

Most of the structures are older 2 and 3 story buildings, and are in fair to poor repair. These residences are interspersed throughout predominantly commercial and industrial areas. and are located on generally heavily traveled streets. In general, given the predominance of industrial activity, these areas are not well suited for future residential development, with the exception of those areas adjacent to the Pavonia Avenue and Exchange Place PATH stations.

OFFICE AND COMMERCIAL ACTIVITY

There is almost no retail commercial development along the Jersey City waterfront. What little development there is primarily serves the two small clusters of residential development north of the Morris Canal Basin, and the office and factory workers in the Exchange Place area. There is no identifiable shopping district in the entire study area.

Far more significant, in terms of employment, tax revenue, and most other economic aspects, is office development. Most of this development is located at or near Exchange Place, at the foot of Montgomery Street. Historically, commercial and office development in this area began with the opening of the Pennsylvania Railroad passenger and ferry terminal, which served as that railroad's New York station until the opening of the Hudson River tunnel in 1912. Further growth was spurred by the opening of the Hudson and Manhattan tubes (now PATH) thus placing Exchange Place only 5 minutes from New York's financial district. Office usage, however, never developed to the extent which geographic location might have suggested. This was probably due to at least three major factors: (1) the presence of the railroad itself, with the noise and dirt, (2) the presence of a large and occasionally noxious industry adjacent to Exchange Place, and (3) the simple fact that the area was in Jersey City and not in New York's financial district.

The major office tenants in the Exchange Place area are two banks: Commercial Trust Company and First Jersey National Bank. Other office space is occupied by law offices, financial institutions, the New Jersey Bell Telephone Company , and the United States Post Office. Approximately 3,900 persons are employed in office functions in this area, as shown in the following table.

MAJOR EMPLOYMENT GENERATORS IN THE EXCHANGE PLACE AREA (SPRING 1969)

Name of Firm or Building	Address	Approximate Employment
U.S. Post Office	69 Montgomery St.	1400
Commercial Trust Bldg.	15 Exchange Place	800
First Jersey National Bank	8 Montgomery Street	700
Office Building (2 floors vacant)	1 Exchange Place	600
N.J. Bell Telephone	280 Henderson Street	100
Hudson County National Bank	75 Montgomery Street	200
Provident Savings Bank	239 Washington Street	50
Metropolitan Life Insurance Co.	280 Henderson Street	45
		3895

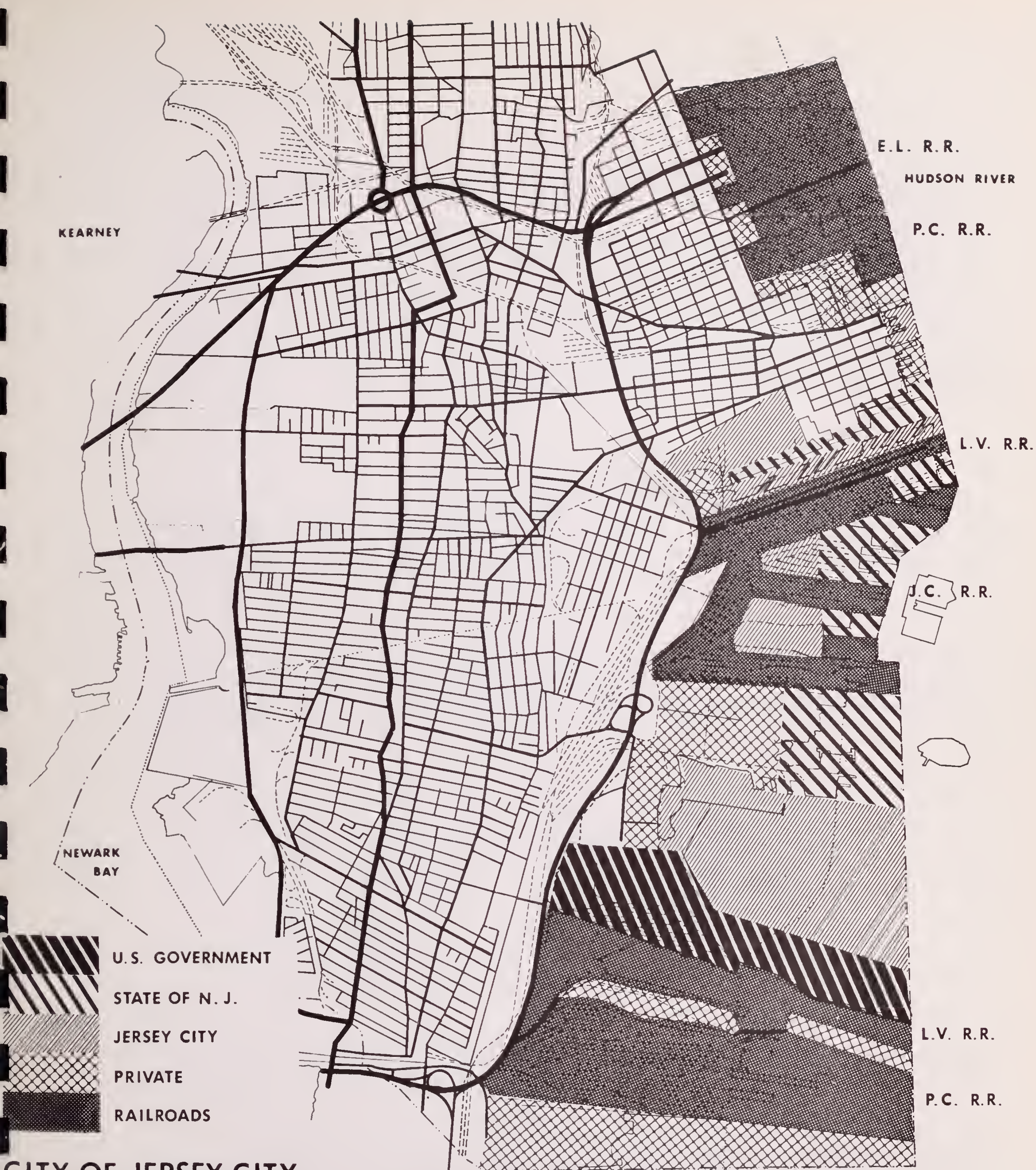
Source: Jersey City Area Development Council.

These figures do not include manufacturing and office employment at Harborside Terminal, amounting to approximately 7,500, and 2,300 persons at the Colgate Palmolive Company, for a total of about 14,000 in the general Downtown-Exchange Place vicinity.

Rentals in the area have averaged about $5 per square foot for commercial space. Office space soon to be completed by the Ukrainian Association will average approximately $7 per square foot.

Existing Transportation System

There are three primary forms of transportation access to the Jersey City waterfront: highway, rail and water. All three modes will be of vital importance to any future redevelopment of the waterfront.



CITY OF JERSEY CITY

WATERFRONT OWNERSHIP

scale in feet
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5

Highway Access

Major highway access is provided to the south and central portions of the waterfront by the Hudson County extension of the New Jersey Turnpike, with interchanges at the Jersey City-Bayonne line (Exit 14A), and at Bayview Avenue-Caven Point Road (Exit 14B). Access to the downtown waterfront is provided at the Grand Street exit and at the terminus of the Turnpike Extension at the Holland Tunnel Plaza. The extension connects with the New Jersey Turnpike at the Newark Airport-Port Newark interchange, approximately 3 miles west of Exit 14A, with direct access to major traffic routes to the north, south, and west. Auxiliary access is provided by the Pulaski Skyway and U.S. Routes 1 and 9.

For traffic movement within the Hudson County metropolitan area, the waterfront is served on the south by Route 169, which provides access from Bayonne and Staten Island, thus providing direct Routes to Long Island as well. It is also served by Hudson Boulevard and by Route 440, which provides a connection with Routes 1 and 9.

Direct access to the southern and central waterfront from the City street system is restricted to seven or eight points, all but one of which involve either a railroad grade crossing or obsolete wooden overpasses with severe weight restrictions, as follows:

Weight Restrictions on Waterfront Bridges

Communipaw Avenue	15 Tons
Caven Point Road	20 Tons
Chapel Avenue	20 Tons
Linden Avenue	20 Tons
Gates Avenue	10 Tons

While these bridges are adequate for present day accessibility, any more intensive traffic would necessitate replacement of all the bridges.

Internal circulation within the southern and central portions of the waterfront is hampered by the lack of north-south through streets; the one exception is the area around Burma Road and Liberty Industrial Park. Construction of such a road in the near future would be extremely expensive, since it would

be necessary to bridge a number of railroad tracks and yards. At present internal traffic must cross the heavily used Lehigh Valley-Jersey Central main lines, proceed along local, predominantly residential streets, then cross back over the railroads, either on weak bridges or at grade, to the waterfront.

Access to the downtown waterfront is provided exclusively by the local street system, which is narrow and congested. Because of the intensity of existing development in the area, it is unlikely that the streets can be widened in the immediate future with the exception of portions of Montgomery Street and Henderson Street.

Water Access

Access to most points along the Jersey City waterfront as well as to most of New York Harbor is maintained by the U.S. Army Corps of Engineers. This access consists of natural and dredged channels running parallel to the shoreline. The Corps of Engineers also maintain access to the Morris Canal Basin, and to the pier extending from the Caven Point Army Terminal, which is the site of local Corps headquarters. Access to private piers is maintained by the owners or the lessors of the piers.

All of the waterfront north of the Morris Canal Basin is directly accessible from the Hudson River. The waterfront south of the Basin can be reached only from dredged channels which intersect the major channels; for most of its length, the main channel is 2,000 feet or more from the shoreline. The major piers along the waterfront are:

A. Various Central Railroad of New Jersey piers, including a coal pier, just south of Ellis Island;

B. Lehigh Valley and National Docks pier just south of Liberty Island;

C. An abandoned fuel pier extending from the Tankport fuel terminal;

D. U.S. Army pier at Caven Point;

E. Greenville (Penn Central) and Claremont (Lehigh Valley) piers at the southern boundary of the City;

F. Colgate Palmolive piers at Exchange Place;

G. Piers D and F, Harborside Terminal;

H. Penn Central piers at Harsimus Cove;

I. Pier 9, presently vacant, at the Holland Tunnel;

J. Erie-Lackawanna piers on the northern waterfront.

In addition, a 17 berth containership is under construction by the Port Jersey Corporation at a site straddling the Jersey City-Bayonne line.

The areas between the piers are composed largely of shallow tidal flats which are not navigable. There are several anchorage areas, both general and temporary, along the waterfront south of the Morris Canal Basin.

Rail Access

The waterfront is served by four major railroads and their subsidiaries:

The Penn Central Transportation Company
The Central Railroad of New Jersey
The Lehigh Valley Railroad
The Erie-Lackawanna Railway.

The PATH subway system has two stations located on the Jersey City waterfront, one at Pavonia and a second at Exchange Place. This facility provides quick, efficient mass transportation for area residents.

For full discussion of rail service to the Jersey City waterfront, see previous section, "Existing Land Use - Railroads".

Soil Conditions

A comprehensive study of soil and geological conditions along the Hudson River waterfront in Jersey City has never been made. To determine the general conditions, it has been necessary to consult a number of reports compiled for various agencies and clients at various times in the past twenty or so years.

Data is available from a 1949 study conducted by the Port of New York Authority, which in turn was a compilation from numerous other sources. According to this report, the area presently occupied by the Morris Canal Basin and the Lehigh Valley and Central Railroad of New Jersey south of the Basin could support heavy shipping facilities and pier development, including structures up to seven stories in height. The following description of physical characteristics is quoted from that report.

> "At Weehawken the river swings away from the palisades while the palisades itself recedes abruptly several hundred feet from the shore. Consequently, a rapidly broadening foreshore becomes available which reaches its maximum dimension of about two miles in the Communipaw section of Jersey City, directly opposite the southern tip of Manhattan Island. This slope of the subsurface rock off shore becomes more gentle as Communipaw is approached and foundation construction problems are reduced. The upper New York Bay frontage presents a highly irregular shore line, largely manmade in an effort to overcome natural geographic disability. Between the natural shoreline and a deep water channel of the bay, there is an extensive stretch of shoal area, extending at its maximum to well over two miles in width. Moreover, a submerged rock ridge coming to within 18 feet of the surface at some points and with a maximum width of about 1500 feet intrudes into the shoal area from a point just behind the Statue of Liberty. South of Caven Point the underlying rock dips sufficiently to clear normal vessel draft, but water depths are still very shallow."

Two plates from the Port Authority report are included in this report, and indicate cross sections of the Hudson River shoreline at various points along the Jersey City waterfront, including the approximate location of the rock contours.

An engineering analysis of Caven Point, prepared in 1962 by the Newark Consulting Engineers, Barnett and Haranchak, gives some indication of the conditions found at that site.

> "Early subsurface investigation and probing, near and on the site, indicate a compressible organic stratum, in some cases strata where the tidal marsh existed. Extending from Ellis Island to Constable Hook and from the natural shore line to the deep water of the bay is a shoal area of less than 20 feet deep excluding the maintained channels. North of Caven Point pier, the shoal area approximates 500 acres with a mean depth of water under six feet. Within this

> shoal area a rock ridge approaches the surface at varying depths. The site is classified as a glacial stratified drift composed of non-residual materials deposited by waters flowing within or from the Wisconsin glacier. Silty materials are usually found at the surface while the coarser materials lie below. The underlying bedrock is diabase which is variable in depth below the surface but is greater than ten feet. There are approximately 70 acres of developed land which is used as a lumber storage yard and a railroad yard. Although this area may not be completely settled, in view of the years of activity and the grandular fill placed over it, a loading of 2,000 pounds per square foot may be assumed for foundation calculations, pending further testing. The undeveloped land must be consolidated for some time before any construction is undertaken."

Boring data from the First Jersey National Bank in the Paulus Hook section of Downtown indicates that bedrock exists at approximately 20 feet below the surface with various silt or sand materials between the bedrock and the surface. Various indications point to the location of bedrock at from 15 to 25 feet below MLW along the length of the Jersey City waterfront.

Public Utilities

Electricity and gas services are provided to the waterfront of Jersey City by the Public Service Electric and Gas Company. It may be assumed that Public Service will expand its services to this area commensurate with the requirements of any redevelopment which may occur.

The Jersey City Sewer Authority maintains a trunk line running roughly parallel to the New Jersey Turnpike, and a treatment plant at the foot of Communipaw Avenue. Potential development of waterfront property, particularly in the area south of the Morris Canal Basin, would require installation of sewers, tied into the trunk line, and if necessary, installation of pumping stations.

The City of Jersey City maintains several water mains which are adjacent to the study area: Garfield and Communipaw Avenues (20 inch lines), Grand Street, (30 inch), and Henderson Street (20 inch). The railroads have maintained their own lines which tie into the City mains. Maintenance has generally been very poor, resulting in pipe corrosions and breaks and low water pressure. (Standard water pressure in the City is 40-45 pounds). Because of poor recordkeeping, many of the railroad water lines are difficult or impossible to locate. Consequently, it is likely that any development on former railroad

lands would require installation or replacement of water lines to tie into one of the existing mains.

Existing Development Plan

The major determinants of the direction in which future redevelopment of the waterfront will go are partially the result of existing plans for new development, whether in-construction, or in stages of advanced or preliminary planning.

The project which at present is most significant in terms of scale, and which will possibly lead to future developments of a similar nature, is the combination 17 berth container port and industrial park now under construction by the Port Jersey Corporation, details of which are discussed in the section on "Industrial Development". The market for industrial parks ahs been demonstrated by the success of Liberty Industrial Park, and several developers have expressed an interest in containership and/or industrial park construction at Caven Point and the adjacent 312 acre city-owned site.

Another major project, though only in preliminary planning stages, is Liberty State Park, the site of which follows the harbor front from the old Jersey Central passenger terminal, passes behind Ellis Island and terminates at a point behind and just to the south of the Statue of Liberty. Originally to be funded through the State of New Jersey's "Green Acres" open space program, construction has not begun, nor has acquisition of all of the 470 acres been completed, because of depletion of "Green Acres" funds. A proposal for a new bond issue in 1972 would allow completion of land acquisition if passed.

With a few exceptions, the downtown waterfront area, from the Morris Canal Basin to beyond Railroad Avenue on the north, and from the Riverfront west to Henderson and Grove Streets, is part of the area designated Paulus Hook Urban Renewal Area. The project area contains approximately 165 acres, and will be executed in successive stages of a Neighborhood Development Program (NDP). NDP I, presently under way, consists of the completed First Jersey National Bank building and an adjacent 15 story headquarters of the Ukrainian National Association, now under construction. Construction is due to start in November, 1972, on a 308-unit apartment building, and a 21-story office building is proposed for the adjacent block. All of these buildings are on the north side of Montgomery Street, between Hudson and Warren Streets.

The Paulus Hook project is part of a larger program, the Downtown General Neighborhood Renewal Plan (GNRP), which is a contiguous group of 5 urban renewal projects totaling 498 acres. While none of the other four projects are in the waterfront study area, three of them -- Hamilton Park, Newark Avenue, and Van Vorst -- are adjacent to the study area. In addition, a non-GNRP project -- the Henderson Street Urban Renewal Area -- is contiguous to the northern part of the study area. As presently planned, the dilapidated tenements now demolished will be replaced by new housing and commercial space. Henderson Street, a boundary street of the study area, will be widened to serve a major traffic artery for Downtown Jersey City.

Statistical Summary
Jersey City Waterfront

Railroad Acreage In Jersey City: 1970

	Class I	Class II	Total
Penn Central	81.475	548.534	630.009
Jersey Central	80.523	362.607	443.130
Erie-Lackawanna	132.911	476.669	609.580
Lehigh Valley	143.129	175.010	318.139
TOTAL	438.038	1562.820	2000.858

Class II Assessments of Railroad Waterfront Property: 1971

	Land	Improvements	Total
Penn Central	$ 12,834,701	$ 7,216,855	$ 20,051,556
Jersey Central	7,480,295	4,354,382	11,834,677
Erie-Lackawanna	11,765,152	5,424,713	17,189,865
Lehigh Valley	3,315,277	2,021,905	5,337,182
TOTAL	$ 35,395,425	$19,017,855	$ 54,413,280

Average Per/Acre Assessed Value - Railroad Waterfront Property - 1971

	Land	Improvements	Total
Penn Central	$ 25,876	$ 14,550	$ 40,426
Jersey Central	20,836	12,129	32,965
Erie-Lackawanna	52,996	24,436	77,432
Lehigh Valley	19,163	11,687	30,850
TOTAL	$ 28,316	$ 15,214	$ 43,530

State Aid - Railroad Tax Revenue to Jersey City

1967	$ 6,565,031.89
1968	5,462,001.81
1969	5,154,176.14
1970	4,798,675.68
1971 (anticipated)	4,611,826.89

Railroad Employment - 1970

Penn Central	779
Jersey Central	500
Erie-Lackawanna	N/A
Lehigh Valley	147

Major Waterfront Employers

Railroads	1,426	(excluding Erie-Lackawanna)
Harborside Terminal	7,500	
Colgate Palmolive	2,300	
United States Gypsum	250	
Paris Cosmetics	250	
Onyx Chemical	202	
Schiavone Bonomo	190	
Liberty Industrial Park	1,300	(at ultimate development)
Exchange Place Offices	3,895	
Other Manufacturing	1,005	
	18,318	

Tax Revenue for Waterfront Study Area - 1970

Assessments	$ 3,279,607
Railroad replacement taxes	4,798,676
	$ 8,078,283

ECONOMICS OF WATERFRONT DEVELOPMENT

THE POTENTIAL FOR INDUSTRIAL DEVELOPMENT ON THE SOUTHERN PORTION OF THE WATERFRONT

INTRODUCTION

For purposes of this analysis, the southern portion of the Jersey City waterfront is defined as the area from Port Jersey to Liberty Industrial Park which includes the Greenville Yard, Caven Point and city-owned property. The total area consists of approximately 1,100 acres, some of which is underwater. It is adjacent to the New Jersey Turnpike on the west, existing industrial development at Port Jersey on the south, Liberty Industrial Park on the north and several deep water channels of the Hudson River on the west. The area is served by several railroads, including the Penn Central and the Lehigh Valley.

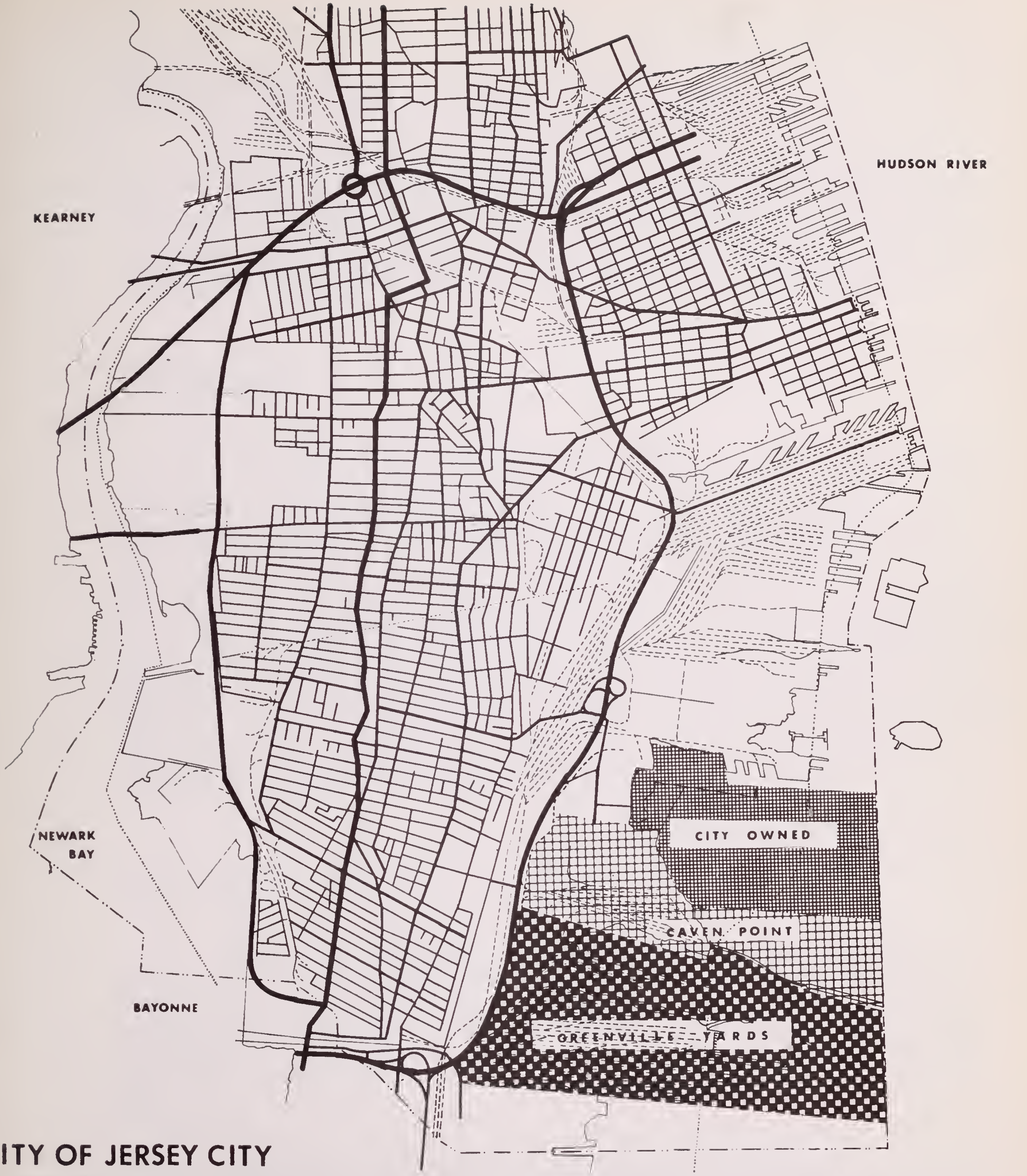
The Greenville Yards owned by the Penn Central Railroad consist of approximately 490 acres which are grossly underutilized. Limited functions performed at the yards include storage and transport of steel for construction in lower Manhattan.

Caven Point is the name given to a 303-acre section of federally-owned land on Jersey City's waterfront. The land, which has been under U.S. Army control for many years, is being appraised and will be released from federal control by the General Services Administration in the near future.

Immediately adjacent to the Caven Point Army Terminal are 312 acres of city-owned land, all of which are under one to six feet of water.

DEVELOPMENT POTENTIAL

Though the area could be considered for housing--given the severe shortages in the metropolitan area--the isolated location of the 1,100 acres, lack of mass transportation and the negative influence of adjacent industrial uses argue against such development. From a positive point of view the area would be ideally suited for industrial development, given the flat topography of the area, its location adjacent to existing industrial development, excellent transportation via the New Jersey Turnpike, several rail lines and deep water channels. In addition, the area is located in the free trucking zone, making truck transport competative with the five boroughs of New York. These factors, when taken together with the financial analysis to follow, point to maximum economic benefits to the developer and the city through industrial development of the 1,100 acre site under study.



ITY OF JERSEY CITY

AREA UNDER STUDY

6

ECONOMIC FEASIBILITY

In-depth analysis of the economic potential for industrial development of the area under study requires discussion of the following factors; land acquisition, site preparation and cost of improvements including structures, utilities and streets. Forecasts of revenue will be compared with annual cost of operation to provide an estimate of return to the developer. A cost-benefit analysis based on the proposed development will also be provided for the City of Jersey City.

Land Acquisition

There have been no recent large scale sales of land on the waterfront to allow for comparative valuation of the 700 stabilized and 400 underwater acres under study. However, discussions with realtors, industrial developers, the Tax Assessor of Jersey City and officials of the Public Utility Bureau in Trenton which assesses railroad property have provided an accurate figure for land value. These groups feel that for purposes of industrial development the 700 stabilized acres are worth $21 million or $30,000 per acre. This information is corroborated by the present value analysis of projected cash flows provided in the appendix of this report. The 300 acres of city-owned land and adjacent 100 acres which are one to six feet underwater are worth approximately $2 million or $5,000 per acre. These figures are based on information provided by the Tax Assessor of Jersey City relative to recent sales of underwater property in the vicinity of Caven Point. Thus the 1,100 acres of waterfront property, under study for industrial purposes, are worth approximately $23 million or $21,000 on average per acre.

Site Preparation

Much of the area under study was originally low tidal marsh that was filled hydraulically more than 40 years ago. Of the approximately 1,100 acres, 700 are 12 feet above mean sea level and the remaining 400 are from one to six feet below mean high water. Bed rock is generally located approximately 20 feet below the river floor. However, a rock shelf or terrace extending from the southeast to the northwest is relatively close to the water surface within the project area.

Conclusive results as to the bearing capacity of existing ground areas are not available to date. Some 600 acres of land developed and used by both

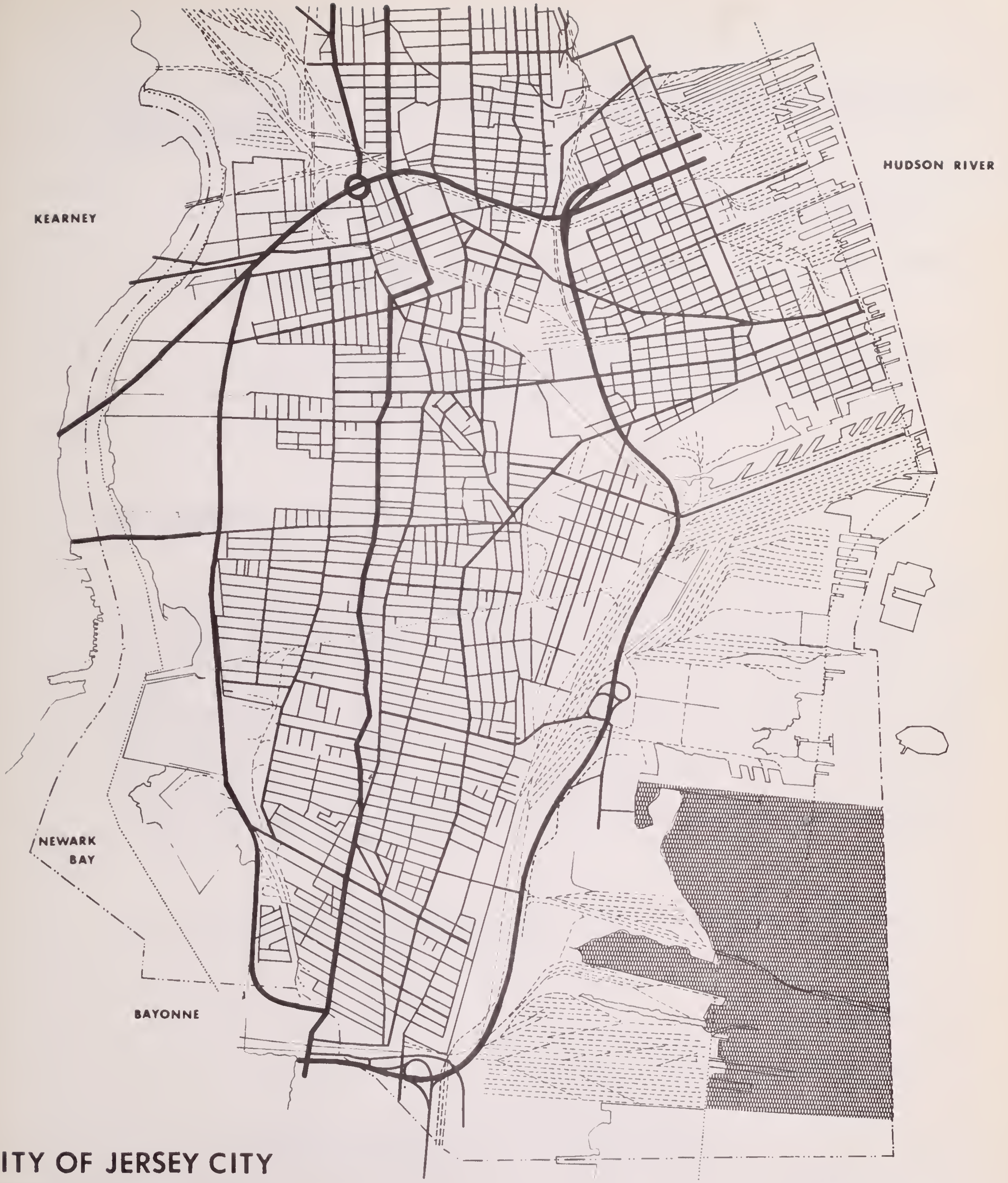
the Penn Central Railroad and the Army Corps of Engineers have supported heavy vehicular and rail traffic as well as storage loads for a considerable period of time.

Preparation of existing land areas and those below mean high water for development purposes include borings and load tests; soil tests; removal or relocation of existing buildings, railroad tracks and other obstructions; clearing; filling and final grading.

Estimate site preparation costs for the 1,100 acre study are include:

A. 700 acres @ $5,000/acre -- this area is above water but requires demolition of existing structures, removal of rail lines and general fill, grading and bulkheading.	$ 3,500,000
B. 100 acres @ $40,000/acre -- this area is partially underwater and requires extensive filling, grading and bulkheading.	4,000,000
C. 300 acres @ $75,000/acre -- this area is totally underwater (1-6 feet)	22,500,000
Total cost of site preparation including fill, piling and bulkheading.	$30,000,000

It should be noted that the above costs may be drastically reduced assuming the city or a private developer can negotiate an agreement with one of several firms in the area able to supply fill material sufficient to fill 300-500 acres at 10 feet above mean high tide. This material is composed of fordhamgneiss, manhattan shist and inwood limestone rock running in size from 100 mesh to one cubic yard in diameter and free of polluting substances. This material is presently being removed from tunnel excavations in the New York area.



CITY OF JERSEY CITY

AREA REQUIRING LANDFILL

scale in feet
0 1500 3000

7

While the use of sanitary landfill would also drastically reduce the above site preparation costs, such material cannot be considered for the following reasons:

1. Methan gas seepage would take place as a result of oxidation.
2. Shrinkage and watertightness problems would arise, preventing use of the site for a minimum of 5 years.
3. Pollution of the Hudson River would take place even with the construction of a dike. Treatment of water pumped out of sanitary landfill would be extremely expensive and would not eliminate all pollution.

Cost of Improvements

The development program for the 1,100 acre site study area would range from warehousing to light manufacturing and include related office, service and other commercial activities. The program would not be dissimilar to that at Liberty Industrial Park which is in close proximity to the site under study. Composed of 150 acres, Liberty Industrial Park has developed approximately 1.6 million square feet of light manufacturing and warehousing space. Using Liberty Industrial Park as an example, it can be expected that once site preparation has been completed, the 1,100 acres under study could provide 11.7 million square feet of industrial space[3] at an estimated construction cost of $163.8 million.[4] To these outlays must be added the cost of utilities, roads and contingencies amounting to $15 million.

Estimated industrial development costs for the entire 1,100 acres under study are summarized as follows:

A.	Land Acquisition	$ 23,000,000
B.	Site Preparation	30,000,000
C.	Construction of 11,700,000 square feet of warehousing and light industrial space at $14 per square foot	163,800,000
D.	Utilities	2,000,000

E. Streets and Sidewalks	$ 2,000,000
F. Contingencies	5,000,000
Total Cost (Approximate)	$202,800,000

COST-BENEFIT ANALYSIS TO THE DEVELOPER

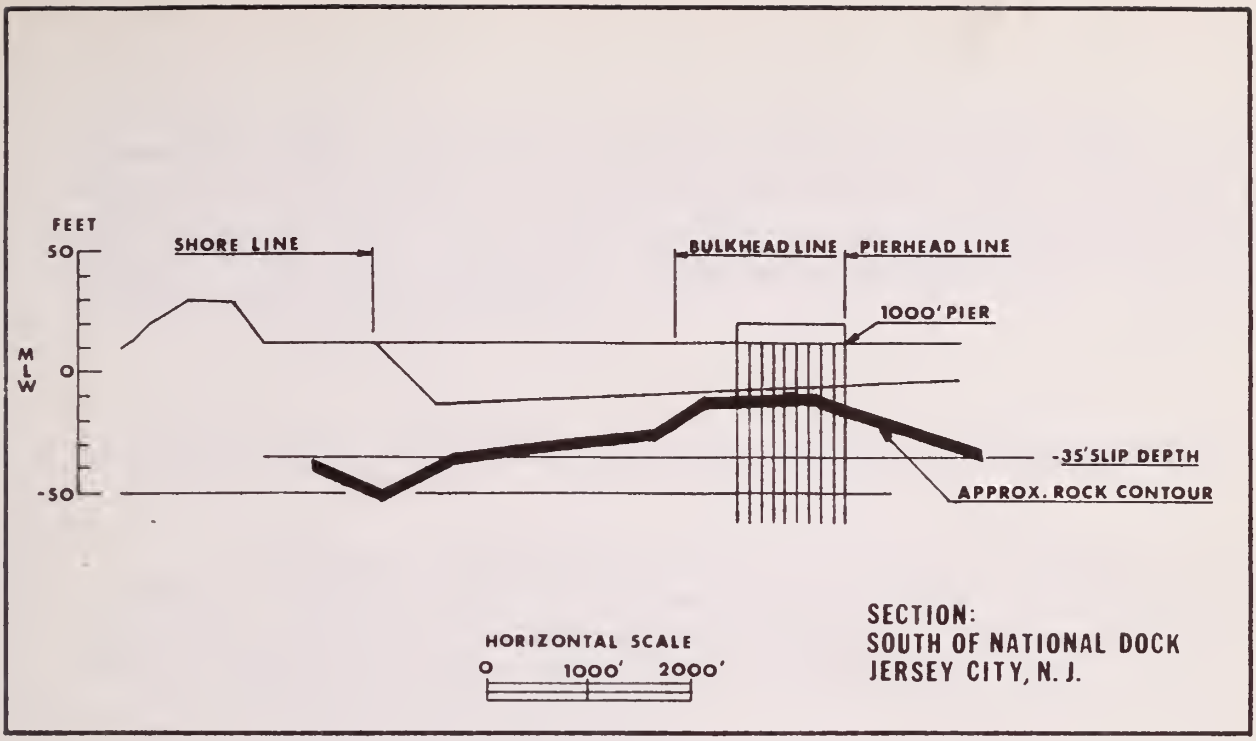
Assuming net rentals of $2.50 per square foot based on projected rentals for warehousing and light industrial space over the next few years (leasee pays real estate taxes, maintenance, etc.) approximately $29.3 million would be derived annually in revenues.[5] If the developer invested 20 percent or $41 million of the total project cost of $203 million toward the development of the industrial park, a mortgage for the remaining $162 million would have to be amortized. For purposes of this analysis a 20 year mortgage at 8 percent interest is assumed. Amortization tables translate the above data into annual constant payments of $15.8 million when subtracted from annual revenues of $29.3 million yields $12.5 million in gross profits. Subtracting operating and promotional expenses; taxes and other costs totaling $8.1 million yields a net profit of $5.4 million or 13 percent annual return on invested capital.

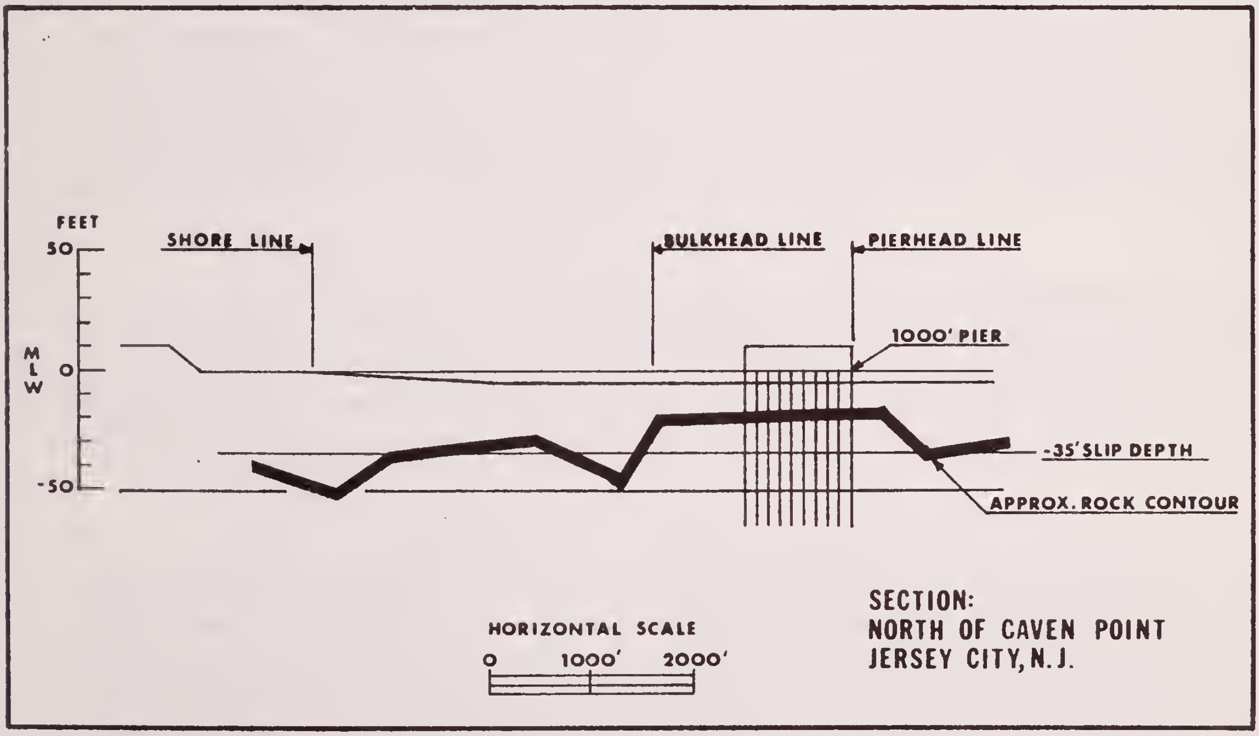
COST-BENEFIT ANALYSIS TO THE CITY OF JERSEY CITY

The development of a large industrial - container operation on the 1,100 acre site under study would provide substantial benefits to the City of Jersey City both in the areas of tax revenue and job opportunities.

Based on the city's present tax rate of approximately $81 per $1,000 of valuation, total annual tax receipts would amount to $16 million.[6] Outlays for police and fire protection and other city services can be approximated at $3 million, resulting in a net intake of $13 million annually. The projections outlined are based on the developer financing all costs of the project including roads and utilities; therefore, the city's costs would be minimized.

In addition to the substantial tax receipts, benefits in the form of increased job opportunities would accrue to residents of the City of Jersey City. Using Liberty Industrial Park as an example again, it can be assumed that if its





CROSS-SECTION of the New Jersey shoreline at two locations

1.6 million square feet of space provide 1,300 jobs, the projected 11.7 million square feet at the 1,100 acre site under study could provide 15,000 jobs[7] with a payroll of $135 million.[8] To these figures should be added the multiplier effect resulting from 15,000 additional jobs; this could conservatively add $200 million to Jersey City productivity through additional retail sales, increased housing starts and other benefits.

CONTAINERSHIP OPERATIONS AND SEMI-OFFICE-SERVICE HEADQUARTERS

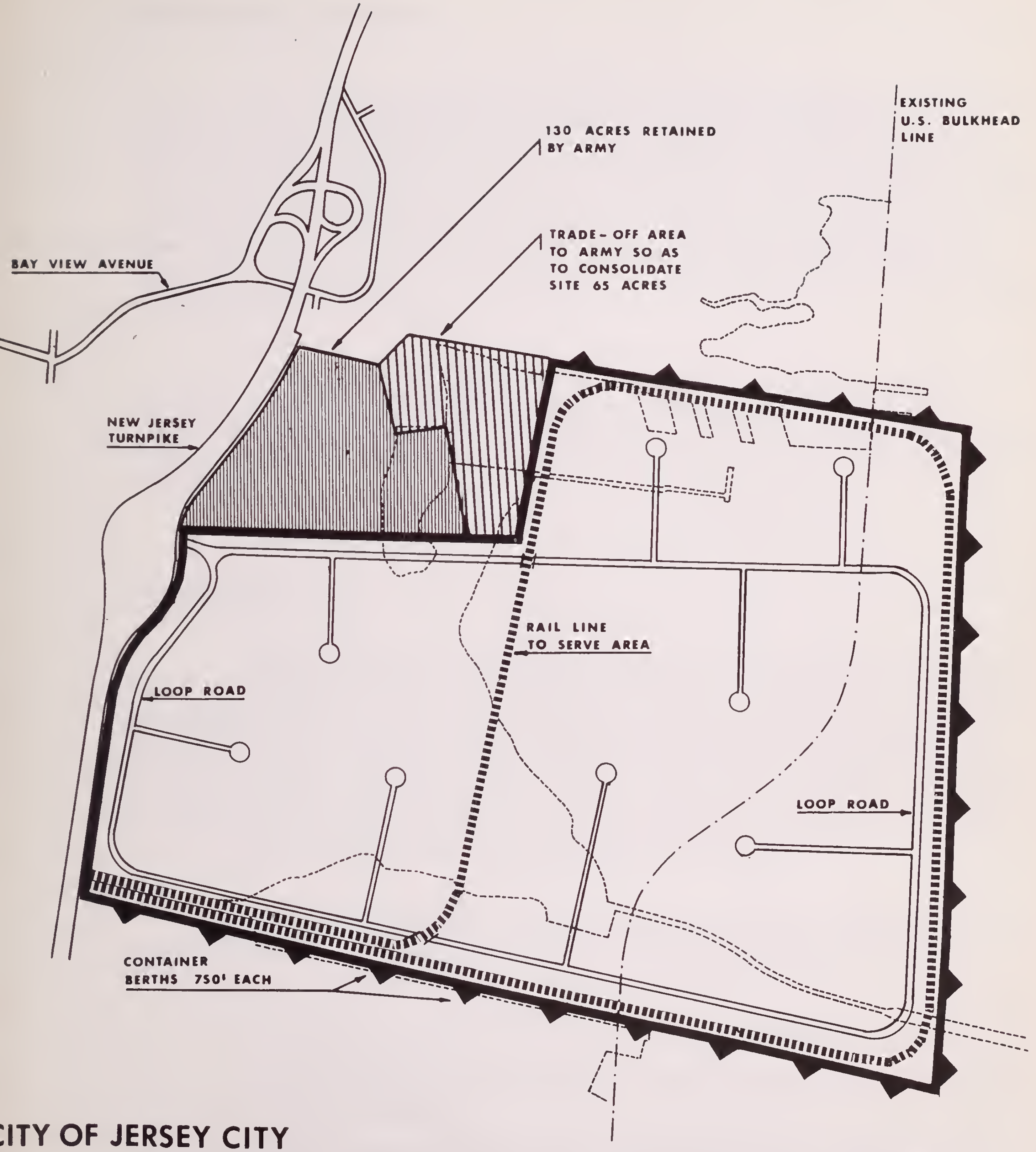
In addition to warehousing and light industrial development of the 1,100 acre site under study, consideration should be given to the development of container port facilities comparable to Port Jersey or Port Elizabeth and office-service headquarters similar to those in Englewood Cliffs.

Containership Operations

Given the strategic location of the 1,100 acre site on the Hudson River waterfront, consideration should be given to the development of containerized shipping operations as well as the more traditional industrial uses. The study area could provide a minimum of ten berths and perhaps as many as twenty with approximately 30 acres of backup space for each berth; the remaining land would be used for traditional industrial activities.

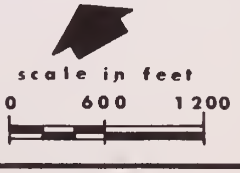
Under these circumstances development costs would increase substantially due to the cost of container wharf construction. Recent estimates of the Port Authority indicate $3,000 per lineal foot as the cost for container wharfs. Thus each wharf, requiring approximately 750 feet, would cost $2.25 million or a total minimum cost of $22.5 million for ten berths.

Total revenues from the project would theoretically increase substantially with the inclusion of containerized operations. However, given the limited experience of container operations, competition from Port Elizabeth and Port Jersey as well as the substantial increased cost of development greater study should be given to the question of container operations as part of the proposed industrial park. In addition, the development of such new processes as Lash, where barges filled with bulk merchandise are stored on the water (usually at marginal pier areas) and lifted on to ships, thus saving the need for large land areas and structures for storage, may make containerized operations too costly.


130 ACRES RETAINED BY ARMY
EXISTING U.S. BULKHEAD LINE
TRADE-OFF AREA TO ARMY SO AS TO CONSOLIDATE SITE 65 ACRES
BAY VIEW AVENUE
NEW JERSEY TURNPIKE
RAIL LINE TO SERVE AREA
LOOP ROAD
LOOP ROAD
CONTAINER BERTHS 750' EACH

CITY OF JERSEY CITY

PRELIMINARY SITE PLAN FOR 1100 ACRE INDUSTRIAL PARK



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Office-Service Headquarters

A third use that should be included as part of the overall 1,100 acre industrial park is office-service headquarters. Briefly defined, this would include the back office operations of major corporations in Manhattan as well as the distribution and service center for major manufacturing corporations. An example of such operations is Volkswagen of America, which maintains a 200,000 square feet building in Englewood for office, administrative, service, and experimentation work. A second example would be the Wall Street Journal which has relocated much of its administrative office work and all of its printing operations to South Brunswick.

Both of these corporations provide excellent examples of office-service and industrial uses which provide job opportunities, increased real estate tax revenue deriving from the high level of investment in such plants, and improvements of the aesthetic quality of the area through good design and site planning.

CONCLUSION

Though residential development would seem essential to an overall plan for the waterfront of Jersey City and the economics might prove reasonably acceptable for a developer, the 1,100 acre site under study would not seem appropriate for this use given the lack of mass transportation to the area, the incompatability of adjacent uses and the existence of more favorable locations on the waterfront for housing. In addition, the development of housing at the 1,100 acre location would probably result in a cash loss to the city of several million dollars annually once tax subsidies are introduced.

From a positive point of view, development of the 1,100 acre site for industrial use under city direction would have the following benefits:

1. Annual net cash receipts amounting to approximately $13 million.
2. The addition of approximately 15,000 new jobs in an area of high unemployment.
3. The increased buying power resulting from the 15,000 new jobs.
4. Compatability with adjacent uses.

WATERFRONT DEVELOPMENT
THE POTENTIAL FOR RESIDENTIAL AND COMMERCIAL DEVELOPMENT AT THE TIDEWATER BASIN

RESIDENTIAL DEVELOPMENT

The complexity of the housing market in the metropolitan region, characterized by high density living and high levels of mobility, requires that the region be reviewed as including the entire area encompasing not only New York City's five boroughs but Nassau, Rockland and Westchester in New York and more specifically for this analysis Hudson and Bergen counties in New Jersey. While each area's housing problems vary in degree of intensity, and while unique situations exist, the social and economic threads which tie the region together are so strong that policies directed toward relieving problems and pressures in one area necessarily have repercussions in the others.

Supply and Demand Factors

The total number of housing units constructed in the last three years within the metropolitan area has been under 100,000 a year, according to reports issued by the Regional Plan Association. This barely keeps up with the increase of households in the region. In addition, the area is not keeping up with replacing or rehabilitating housing that is constantly becoming obsolete, which Regional Plan estimates is about 70,000 units a year. Inroads are not being made on replacement of occupied inadequate housing.

Housing construction for new households, replacement and rehabilitation of deteriorated housing and increased space per person would require at least a 50 percent increase in the annual new housing construction rate and possibly a doubling of the rate over the next fifteen years.

The outlook is not optimistic. Shortages of skilled labor in the building trades and restrictions on union employment limit potential. Unions have fewer members than at any time since World War II; most of their members are beyond their middle years and there is an insufficient number of young apprentices. Pursuit of a restrictive monetary policy by the federal government recently in the face of rising prices in the general economy has in addition resulted in acute shortages of mortgage credit. Sharply rising land prices, the cost of credit, when available, coupled with high construction costs and problems combine to divert capital to more profitable areas of investment.

The Jersey City Housing Market

The Jersey City housing market area, though a small part of the New York metropolitan region, is nevertheless strongly tied to the area. In-and-out commutation between Jersey City and the larger adjacent cities is extensive.

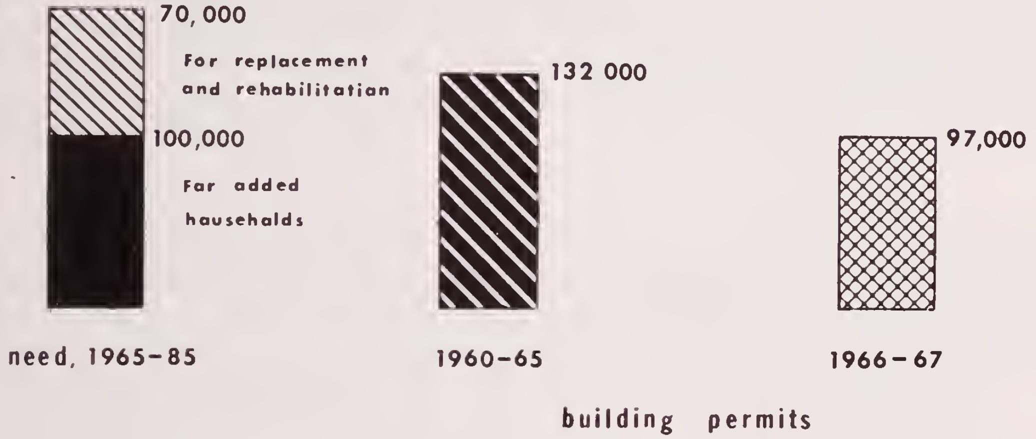
During the first half of the 1960 decade, the population of the Jersey City housing market decreased sharply. Since 1965, however, factors have reversed the downward trend. Economic growth, especially in Newark and New York, has resulted in increased worker out-commutation and decreased out-migration of the population. As the supply of available housing units in nearby labor markets was absorbed, Jersey City became a prime source of both low and high priced living quarters. During the past few years the number of units available in the Hudson Metropolitan Area diminished to a level where both sales and rental accomodations were in short supply. According to a Housing and Urban Development Department study entitled "Housing Market Analysis of Jersey City" (completed in June 1969), homeowner and renter vacancy rates are extremely low, having gone from 3.4 percent in 1965 to 1.7 percent in 1969. Therefore, any housing which will be provided over the next few years will have to come primarily from new construction.

The demand for new housing in Jersey City is based upon a projected increase of 1,650 in the number of households each year for at least the next two or three years.[9] Barring unanticipated changes in the economic, demographic and housing parameters, the Department of Housing and Urban Development (HUD) estimated an average annual demand for 2,350 nonsubsidized new housing units for the period from June 1969 to June 1971. Furthermore, HUD's Housing Market Analysis estimates that the most desirable demand supply balance in the market would be achieved if 150 units were supplied as single family homes (priced above $30,000) and 2,200 were units in multi-family structures. (See attached exhibit for a detailed breakdown of rentals and units for nonsubsidized housing.) The estimated demand for 2,350 new non-subsidized housing units annually is predicated primarily on the behavior of employment, population and housing inventory factors.

The annual occupancy potentials for subsidized housing in F.H.A. programs are based on 1969 incomes, on occupancy of substandard housing, on estimates of the elderly population income limits and on available market experience. HUD's Market Area Analysis for Jersey City projects a need for 1,840 subsidized rental housing units and 2,200 rent supplement recipients for the period from June 1969 to June 1971. Thus, over a period of two years a total of 6,400 units are needed in the Jersey City metropolitan region. New construction and permits issued for the period of January 1, 1969 - December 30, 1970 in-

Housing Need, 1965-85 vs. Recent Housing Construction, 1960-67

New York - New Jersey Metropolitan Region

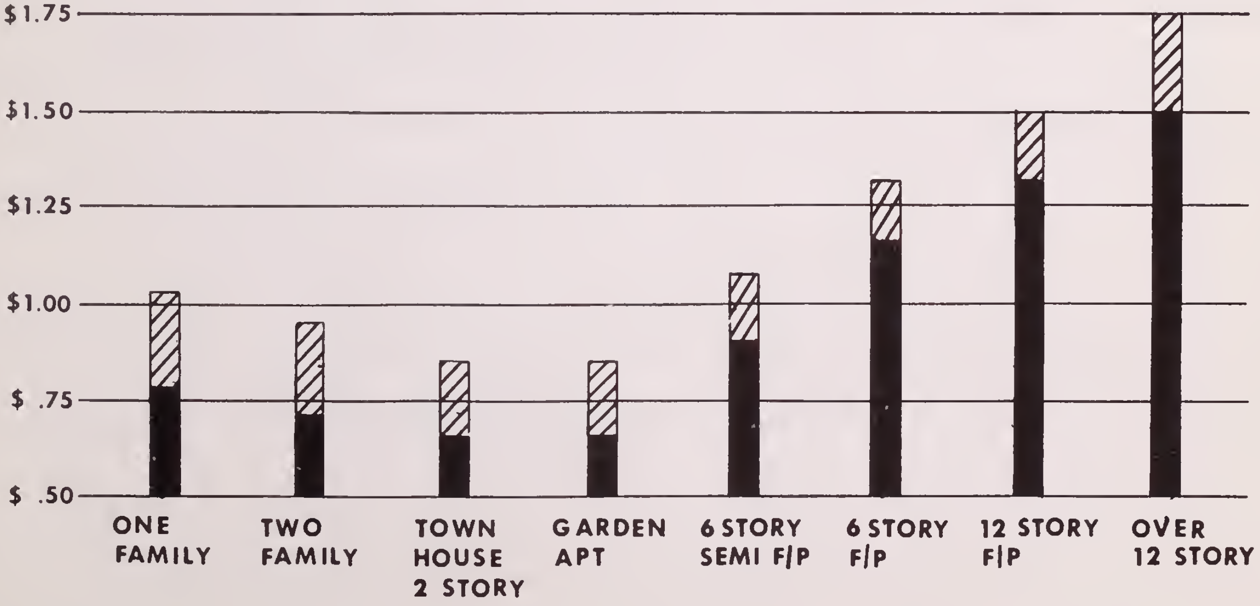


- In addition, about 1.4 million housing units should be replaced or substantially rehabilitated and modernized over the 1965 - 85 decades, an average of 70,000 housing units a year. During the 1960s, we have not been building anywhere near 170,000 units a year.

Comparative Construction Costs of Different Housing Types

Labor and materials only

New York - New Jersey Metropolitan Region



dicate 380 units actually developed or planned. Projecting this rate of development through 1971, a deficit of over 6,000 units will exist in the area and, based on present trends, this deficit can be expected to grow over the years.

Between 1965 and 1969 the deficit in the housing market of Jersey City was partially met by a reduction of about 2,400 in the number of vacant units in the city. But vacancy rates over the period have declined steadily from 3.4 percent to 1.7 percent. Since vacancies are now at an extremely low level, future demand must be satisfied primarily through new construction and rehabilitation where feasible.

The above estimates approximate the internal growth expected in Hudson County alone and do not include the demand which will also arise as a result of spillover from New York City and adjacent New Jersey markets. Such spillover, according to the Regional Plan Association, must also be considered in future demand estimates.

The demand for housing in the Jersey City region is obvious. Over the next twenty years the area could easily absorb 20,000 new dwelling units, according to the Department of Housing and Urban Development. The problem is not so much one of defining the overall demand but one of translating the various levels of demand into housing that people can afford and from which residents can gain a sense of pride.

Housing Types

What types of housing should be built? A checklist of considerations prepared by the Regional Plan Association include:

1. Characteristics of demand (by income, household size, age, etc.)
2. Construction costs.
3. Amount and cost of accessible land.
4. Compatability with existing and future development.
5. New design and planning standards.

With regard to the first point, characteristics of housing demand, an analysis of current housing by income group is helpful. Lower-income households in the Region rely heavily on the existing supply of walk-up apartments which housed 46 percent of households with incomes under $5,000 in 1963. Households with incomes greater than $5,000 occupy single-family detached houses in far greater proportion. However, in the highest income levels, the proportion of elevator apartment dwellers rises sharply. Thus, with rising incomes, a shift from the involuntary occupancy of walk-up apartments to medium density housing types can be expected, as well as a greater market for high rise luxury apartments.

As to the second point, construction costs, a study commissioned by the Regional Plan Association in 1966 concluded that two-story garden apartments and attached houses, row or town houses, of essentially frame and brick construction are least costly to build per unit of floor space or volume, considering labor and materials only, when located outside densely developed areas. The Lehigh Construction Company of Kenilworth, New Jersey, estimates $16,500 to be the approximate cost per unit for town house type development. The construction cost of high rise apartments is generally twice that of garden apartments and attached houses but becomes appreciably less when considering land costs in the densely populated metropolitan region. A spokeman for Tishman Realty Company of New York City stated that $30,000 is an approximate minimum cost per dwelling unit for the development of high rise housing considering only materials and labor. This estimate has been verified by analysis of several projects now underway in Ft. Lee and Glenwood Park, New Jersey. Single-family units cost about 50% more than garden type apartments or townhouses.

Factors Determining Location of Residential Development

The development of residential areas should be undertaken within the framework of locational guidelines which are generally appropriate for all areas, but should allow for specific factors within each locality. In Jersey City these would include:

1. The Jersey City waterfront located on the Hudson River with excellent views of the Manhattan skyline.
2. Proposed development of Liberty State Park on the waterfront from the Tidewater Basin south to Liberty Industrial Park.

3. Existence of mass transit PATH line with stations presently located at Pavonia, Grove Street, and Exchange Place making waterfront areas minutes from Journal Square, Newark and Manhattan for work and shopping.

4. Proximity to the New Jersey Turnpike.

5. Recently completed and proposed new developments such as Gregory Park, Paulus Hook and the Henderson Street Urban Renewal Project all of which would be properly complemented by new housing.

6. Proximity to existing residential areas, especially those soon to be rehabilitated such as the Van Vorst and Hamilton Park areas.

7. Availability at present of, or proximity to, utility lines.

8. Present condition of land; cost of preparation.

9. Present uses of land and their level of productivity and efficiency.

Proposed Residential Areas

Analysis of the factors outlined for location of residential development point to one major area which would seem most favorable for such use along the waterfront. This area, comprising some 640 acres with an 80 acre water basin, is the Tidewater region. It is bounded by Grand Street to the north and the New Jersey Turnpike to the west, with Liberty Industrial Park, the proposed Liberty State Park, James Hamill Drive and the Hudson River being the southerly and easterly boundaries respectively.

The area is characterized by large tracts of flat, vacant land with scattered industrial and ancillary activities concentrated in the most easterly portion of the site adjacent to the Tidewater Basin. The only major activities are those of United States Gypsum and Schavone-Bonomo which have large plants in the area. The several remaining industrial structures are either used by marginal warehousing operations or are vacant. Railroad activity is concentrated in the lower half of the site, with the Lehigh Valley and Central Railroad of New Jersey being the two operating organizations. Neither railroad makes efficient use of its property; the Central Railroad of New Jersey has requested that liquidation proceedings be instituted, while the Penn-Central, which owns most of the Lehigh Valley Railroad, is in receivership.

A small pocket of residential structures dating from the mid 19th century exists in the north-easterly section of the site under study. Covering several blocks between Essex and Grand Streets, these structures, with their uniform facades and cornice lines, are architecturally noteworthy and should be rehabilitated as part of the overall program.

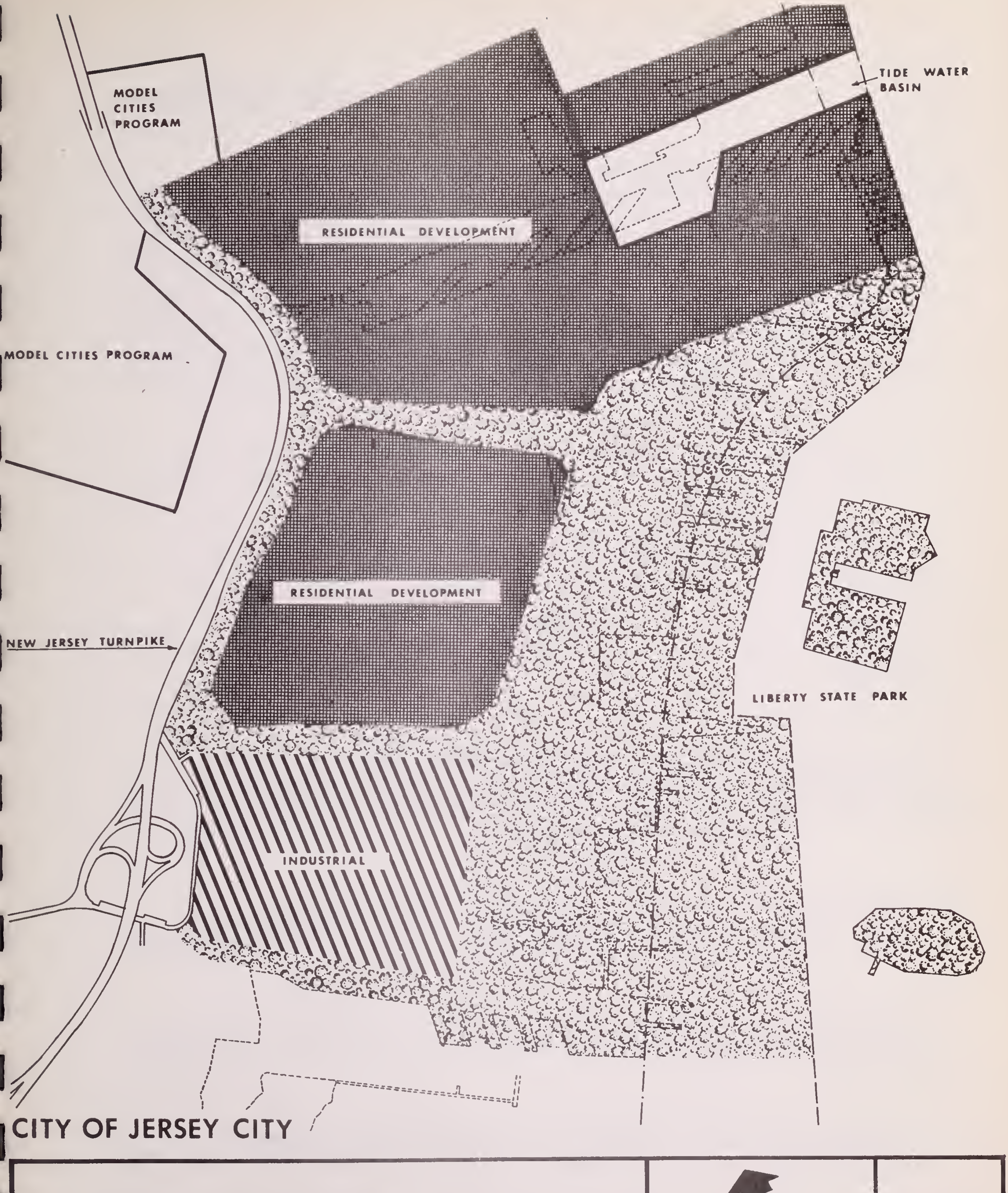
Although utilities, water and electricity, were installed in portions of the site many years ago in anticipation of industrial development, their age, condition and limited capacity would require installation of new utility lines by extending facilities from adjacent densely populated areas. Presently the only through streets on the site are Jersey Avenue, running north-south, and Johnston Avenue, running east-west. Both are in poor condition.

Much of the site under study is the result of land fill operations dating back to the early 1900's. Although borings and soil tests are not available for the entire site, sample tests taken in the spring of 1970 indicate that structures under four stories would not require pilings; high rise buildings would require the support of piles.

Of the approximately 640 acres, the City of Jersey City owns 180, the State of New Jersey 100, the railroads 245, with the remaining 115 acres in private ownership. Approximately 44% of the total area is in governmental (city and state) ownership, including the most accessible and potentially productive properties.

Presently the City of Jersey City derives approximately $900,000 in tax revenue from the property under study that is in private ownership; railroad property provides an additional $1.3 million in revenues. Approximately 900 people are employed in the study area, but it is significant to note that three firms (Morris Basin Dry Docks, Inc., Schavone-Bonomo and U.S. Gypsum Company) employ approximately 80 percent of the total area work force. The breakdown of tax revenue and employment is detailed in Chapter II of this report, Present Land Uses.

Since much of the area in the Tidewater Basin is vacant, problems of relocation in the development process are minimal. Large sectors of the site are within minutes of developed areas of the city and several blocks from Path stations at Grove Street and Exchange Place. Possessing excellent aesthetic potential, central location and accessibility, the site would be ideal for residential development.



CITY OF JERSEY CITY

TIDE WATER BASIN

scale in feet
0 600 1 200

9

DEVELOPMENT PROGRAM & COSTS

For purposes of analysis, it is estimated that densities of 100 dwelling units per gross acre will take place, consisting of a mixture of elevator and garden type apartment structures. Though this density figure may seem high when compared to the St. John's development of 55 dwelling units per acre or Gregory Park's density of 43 units per acre, it is low in comparison with such projects as the residential section of Battery Park City, where densities of 300 dwelling units per acre are planned in setting far more attractive and with more usable open space than in the Jersey City examples. In addition, these densities do not consider the fact that an additional 30 percent of the project area, or 200 acres, would be devoted to parks and the marine basin.

Subdivision of the total area in accordance with accepted planning principles would assume approximately:

15% of land area for streets and sidewalks -	121 acres
30% of land area for buildings -	190 acres
20% of land area for parks -	125 acres
10% of land area for commercial -	62 acres
10% of land area for schools -	62 acres
12% of land area for basin -	80 acres
	640 acres

While the above figures may be used as guidelines, imaginative site planning and design could significantly reduce the amount of land in streets and commercial space, thus increasing the area for open space or other uses. However, for purposes of this analysis, the guidelines set forth will be used.

At a density of 100 dwelling units per acre, approximately 19,000 units could be constructed on 190 acres; this could create a residential community of 60,000 people, almost equal to one fourth of the city's population.

Development can be broken into three specific areas: land preparation, construction of housing, and capital improvements on the part of the City of Jersey City.

Costs for site preparation at the Tidewater Basin will be minimal in comparison to the southern portion of the waterfront. Little, if any, landfill will

be required, with the major problems being removal of railroad tracks, leveling, grading and bulkheading. Total site preparation costs can be assumed to be $6 million, broken down in the following manner:

A. 500 acres @ $4,000 per acre includes demolition, clearing and grading	$ 2,000,000
B. 60 acres @ $40,000 per acre includes partial filling, clearing and bulkheading	$ 2,400,000
C. 80 acres @ $12,000 per acre includes dredging and bulkheading	$ 960,000
Total cost for site preparation (approximate)	$ 5,360,000

Construction costs for 19,000 dwelling units composed of elevator and garden type apartments will average about $25,000 per unit with total costs amounting to approximately $475 million. Investment on the part of the city for utilities, parks, schools, etc., will amount to approximately $65 million[10] with land acquisition costs totaling some $15 million based on full assessed value.

The costs of developing residential community are:

A. Acquisition of land	
1. Private ownership	$ 6,000,000
2. Lehigh Valley Railroad	1,200,000
3. Central R.R. of New Jersey	7,700,000
B. Site Preparation	5,300,000
C. Structures at $25,000 per dwelling unit (19,000 units)	475,000,000
D. Utilities	10,000,000
E. Streets, roads, sidewalks	5,000,000
F. Schools	32,000,000
G. Parks and playgrounds	10,000,000
H. Police, fire protection, etc.	8,000,000
Total Cost (approximate)	$560,000,000

For purposes of this report, several situations will be analyzed relating to the development of the 640 acres under study.

Residential Development With No Tax Subsidies Or Other Benefits To The Developer

Under these circumstances the city would derive annual tax revenues of $40 million based on assessment of $81 per $1,000 of value;[11] capital outlays on the part of the city would amount to approximately $65 million. Amortization of the $65 million cost through the issuance of bonds for varying time periods ranging from 20 to 70 years at an interest rate of approximately 7 percent or a write off against future taxes results in annual expenses of from $6.1 million to $3.6 million.[12] Thus the net return to the City of Jersey City, after an additional deduction for operating expenses--schools, grabage collection, police, etc.-- of $12 million would range from approximately $24 to $22 million annually depending on the method chosen to finance the city's capital improvements for the project.

The above analysis, however, has not considered revenues, costs and profit margins to the developer; that is, the economic feasibility of developing housing on the 640 acre site under study. Total cost of development amounts to $495 million (land acquisition, landfill and construction) which when amortized over a 20 year period at 8 percent after an initial cash investment of $95 million (20 percent of project cost) results in annual payments of $40 million for principal and interest.

Total annual costs would be:

A. Principal and Interest	$ 40,000,000
B. Taxes	40,000,000
C. Insurance	3,500,000
D. Maintenance	5,000,000
E. Heat	1,500,000
F. Electricity	350,000
G. Other	1,000,000
Total Annual Cost (approximate)	$ 91,000,000

Assuming a 13 percent rate of return on invested capital ($99 million), a developer would have to derive approximately $12 million in profits each year; with expenses totaling $91 million, revenues would therefore have to be about $103 million annually.

Annual revenues of $103 million breakdown to a per room rental of $112 per month.

$$\begin{array}{rl} 19{,}000 & \text{dwelling units} \\ \underline{\times 4} & \text{rooms per unit} \\ 76{,}000 & \end{array}$$

$$\frac{\$103{,}000{,}000}{76{,}000} = \$1{,}355 \text{ per room per year or } \$112 \text{ per room per month}$$

Residential Development With Tax Subsidies Or Other Benefits To Developer And Residents

Estimates of the Department of Housing and Urban Development reveal that the market for apartments with a rental in excess of $80 per room is relatively small; approximately 15 percent of total need. Therefore, to make the project feasible, various types of subsidies would have to be introduced to reduce the per room rental cost. These subsidies include the F.H.A. 236 program under which mortgages for 40 years at 1 percent interest can be obtained by limited dividend and non-profit groups; the state H.F.A. program allowing for 40 year mortgages at 6 percent interest for limited dividend and non-profit groups, and the 15 percent gross receipts tax in lieu of real estate taxes for limited dividend and non-profit groups. The chart which follows outlines the types of subsidies mentioned and the resulting reductions in room rentals.

RESIDENTIAL RENTALS

	Scheme A Non-Subsidized Corp.	Scheme B Non-Profit Corp.	Scheme C Limited Dividend Corp.
Total Annual Costs	$ 91,000,000	$ 91,000,000	$ 91,000,000
Less: savings on interest and principal payments based on 236 program (1% interest for 40 years)			
$40 million - $12 million = $28 million		28,000,000	
		62,000,000	
savings on real estate taxes using 15% gross receipts method			
$62 million + $6 million = $68 million			
$68 million x 15% = $10 million			
$40 million - $10 million = $30 million		30,000,000	
OR			
savings on interest and principal payments based on H.F.A. state program (6% interest for 40 years)			
$40 million - $26 million = $14 million			14,000,000
			77,000,000
savings on real estate taxes using 15% gross receipts method			
$77 million + $6.0 million = $83 million			
15% x $ 83 million = $12 million			
$40 million - $12 million = $28 million			28,000,000
Net Annual Cost	$ 91,000,000	$ 32,000,000	$ 49,000,000
Profit at 13% return	12,000,000		
Limited Dividend Corporation - 6% return			(included in above figures)
Non-profit Corporation		-6,000,000	
Total Annual Revenue	$103,000,000	$ 26,000,000	$ 49,000,000
Annual Room Rental	$ 1,355	$ 342	$ 642
Monthly Room Rental	$ 112	$ 28	$ 53

(based on 76,000 rooms)

In addition to these subsidies, the federal rent supplement program can be applied to reduce rental costs. Under this section of federal housing legislation, the F.H.A. will make payments to the owner of the development in the amount of the difference between the actual rent and 25 percent of the tenants income (within given limits). The rent supplement cannot be more than 70 percent of the actual rent and presently applies to 40 percent of the units developed. Under the rent supplement program the $28 per room rental (scheme B) cannot be reduced since 25% X $\frac{5900}{48}$ = $30 per room.[13] However, the rental of $53 per room under scheme C can be reduced to $30 (25% X $\frac{5900}{48}$ = $30) with the federal government paying the $23 per room per month difference to the owner for 40 percent of the units developed.

In the final analysis, all three schemes would be necessary to insure a reasonable return to the developer and provide housing for a broad range of income groups, as well as provide tax revenue to the City of Jersey City. Depending on the mix of housing, revenue to the city would vary:

Alternate I

A.	15% of units developed under scheme A, with no subsidies (15% X $40,000,000) 2,850 units at $112/room	$ 6,000,000
B.	40% of units developed under scheme B, 236 program (40% X $10,000,000) 7,600 units at $28/room	$ 4,000,000
C.	45% of units developed under scheme C, H.F.A. program with rent supplements (45% X $12,000,000) 5,130 units at $53/room 3,420 units at $30/room	$ 5,400,000
Total Tax Revenue		$15,400,000

In the above example a disproportionate number of people will be paying between $28-30 per room (those under schemes B and C or approximately 60% of the entire project). Therefore, to allow for a more equitable distribution and at the same time increase the city's revenue the following alternative is examined:

Alternate II

A.	25% of units developed under scheme A, with no subsidies (25% X $40,000,000) 4,750 units at $112/room	$10,000,000

B. 10% of units developed under scheme B, 236 program (10% X $10,000,000) 1,800 units at $28/room	$ 1,000,000
C. 65% of units developed under scheme C, H.F.A. program with rent supplements (65% X $12,000,000) 4,980 units at $30/room 7,470 units at $53/room	$ 7,800,000
Total Tax Revenue	$18,800,000

Thus with total tax revenue of $18.8 million and expenses of approximately $15 million (depending on the method of financing) the City of Jersey City could obtain a profit of between $3 and 4 million annually with the development of a residential community at the Tidewater Basin.

Commercial Development At The Tidewater Basin

In addition to the residential portion of the project, approximately 60 acres would be devoted to retail and commercial activity to support the residential community. Assuming a total of 1 million square feet of space, development costs would amount to approximately $30 million.[14] Total revenues from the commercial aspect of the project would amount to $9 million annually.[15] A breakdown of total costs on an annual basis include:

A. Mortgage and interest payments (20 year mortgage at 8%)	$ 3,000,000
B. Taxes ($30 million X $81/$1000 of value)	2,400,000
C. Insurance	300,000
D. Heat	150,000
E. Maintenance	700,000
F. Other	500,000
Total Annual Expenses (approximate)	$ 7,000,000

Thus the developer would derive an additional $2 million in profits and would at the same time provide the city with an additional $2.4 million in tax revenue. The total net return to the City of Jersey City for the residential and retail-commercial aspects of the project would amount to $6 million annually.[16]

The development of a new residential community with approximately 60,000 people will in addition create many unquantifiable benefits. These include the multiplier affect resulting from the buying power of 19,000 additional family units on overall city productivity, the social benefits resulting from the provision of new housing to replace substandard units and additional housing needs for all income groups as well as the improvement of the overall image of the city and the waterfront specifically.

Conclusion

Residential development is essential to an overall plan for the waterfront of Jersey City, given the shortage of housing in the metropolitan area. The strategic location of the Tidewater Basin region in relation to existing residential sections and facilities of the city, major new residential construction in the area, the presence of mass transportation facilities as well as economic benefits to the city ($6 million annually) point to residential development of the area. The aesthetic value of locating the residential community at the Tidewater Basin with excellent views of the Manhattan skyline, the Hudson River and the proposed Liberty State Park is a final factor supporting residential development of the area under study.

WATERFRONT DEVELOPMENT
THE POTENTIAL FOR RESIDENTIAL, COMMERCIAL AND INDUSTRIAL DEVELOPMENT ON THE NORTHERN WATERFRONT

INTRODUCTION

The northern part of the Jersey City waterfront extends from Railroad Avenue north to the Hoboken city line and west from the Hudson River to Henderson Street. It is characterized by industrial activity--large factories and warehouses, many of which are vacant or only partially used and in poor condition. The Erie-Lackawanna and Penn Central Railroads are the two operating lines in the district. The Erie-Lackawanna has extensive automobile delivery and storage activities in the area, while the Penn Central is expanding its freight forwarding operation through the construction of new warehouses. In addition, several large meat packing and freezer plants are located in the area. Scattered residential pockets, all of which are in generally poor condition, are found throughout the area. The entire northern portion of the waterfront is, for the most part, more intensively developed than the areas below the Tidewater Basin.

Major activities in the area are headed by the Harborside Terminal, which is a combination warehousing, marine, manufacturing and commercial center with approximately 2.5 million square feet of space and 7,500 employees. A second major force, the Penn Central Railroad, is preparing a master plan for a one-story industrial development in the Harsimus Cove area; this space will be for the railroad's expanding freight-forwarding operations. Chicago Shippers is the first such operation to be located here. The Erie-Lackawanna is the third major activity in the area. Although passenger service has been eliminated in this area, extensive freight operations remain. The railroad is presently expanding its automobile shipment and storage facilities at its Pavonia yards, and is also proposing the development of some industrial and warehousing facilities on its property.

Of the approximately 600 acres located in this portion of the study area, 80 percent is owned by the two railroads, with the remainder in private ownership. The city owns only two small parcels, one at Bay Street and the other at Fifteenth Street.

Access to the area is provided within the framework of the city street system. The major points of access are at Twelfth and Fourteenth Streets, which lead from the Holland Tunnel to the Pulaski Skyway and the New Jersey Turnpike. The area is also served by the PATH rapid transit system, with excellent service to both midtown and downtown Manhattan, as well as to Journal Square and Newark.

The City of Jersey City presently derives approximately $2 million in revenue from the privately-owned property in the study area; railroad property provides an additional $1.4 million in tax revenues. Approximately 8,500

people are employed in the area, but it should be noted that 7,500 of these are employed at Harborside Terminal. The breakdown of tax revenue and employment is further detailed in Chapter II, Present Land Uses.

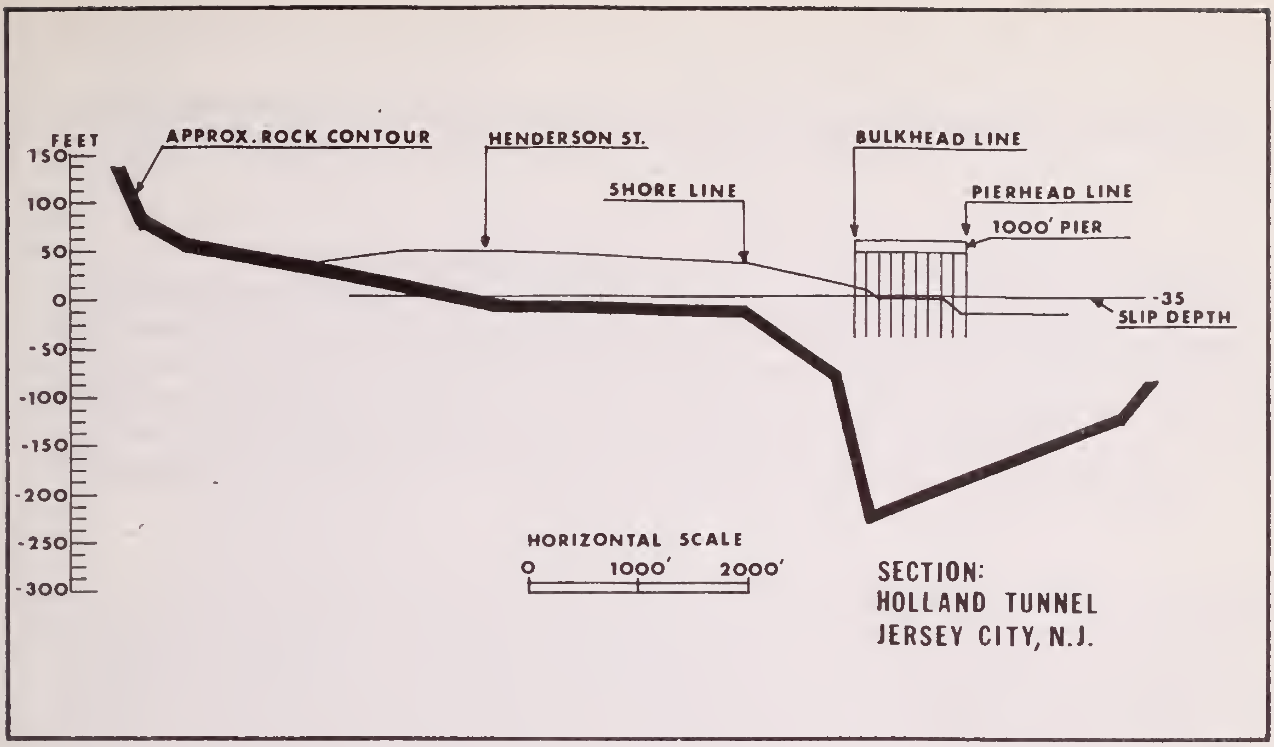
Although some of the area under study may have been filled in the early part of the nineteen century, maps dating back to 1855 show that the bulkhead line was about the same as it is at present. Borings and soil tests are not available for the entire site. Sample tests taken at various locations over the past thirty years indicate, however, that pilings would be necessary for any major structures.

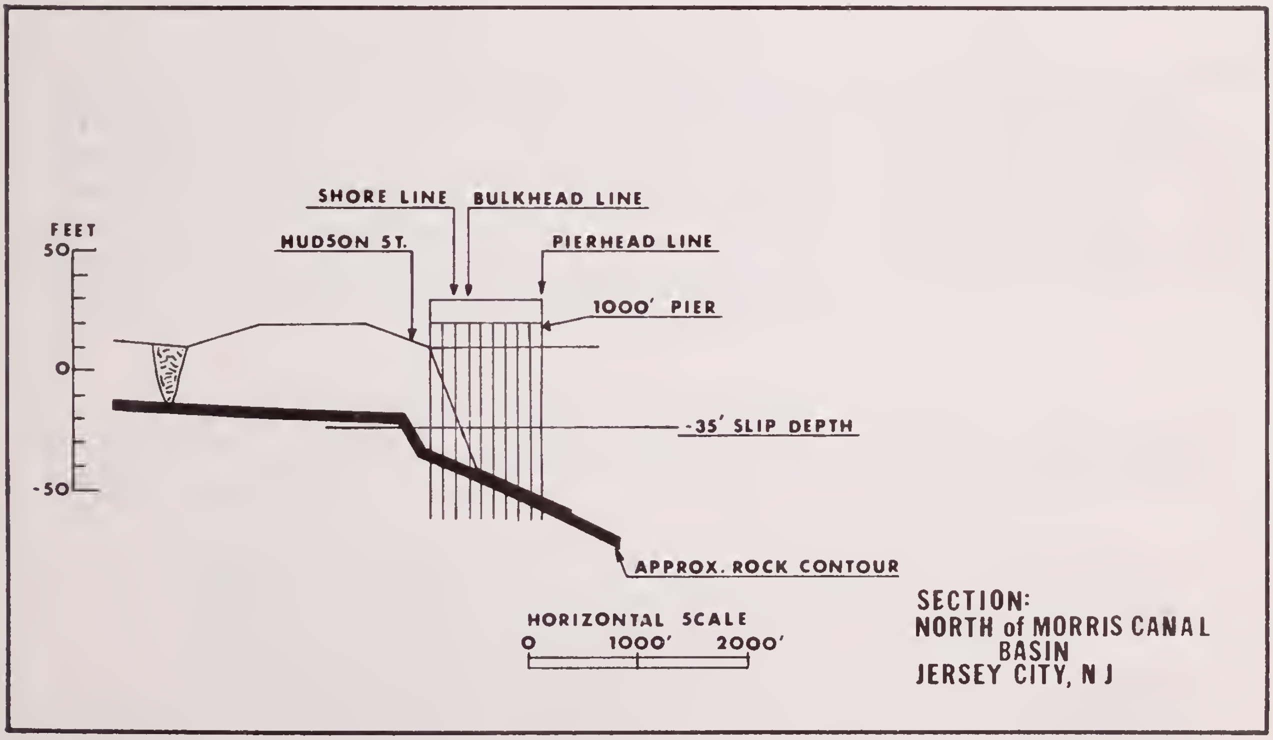
Since large sectors of the northern waterfront are being used at high levels of intensity, relocation and redevelopment present a problem. In some instances redevelopment is clearly unnecessary. But for those areas that are underutilized, blighted, and require redevelopment, it should be noted that many are strategically located in relation to mass transit, have excellent access for both land and sea transport, and because of the riverfront location, have a high aesthetic value.

DEVELOPMENT PROGRAM AND COSTS

A development program for this part of the Jersey City waterfront is extremely complex, given the viability of some existing industrial uses and certain railroad functions and their incompatability with possible residential or commercial reuses. To alleviate this problem and to reduce to a minimum the problem of relocation and loss of existing industry, some areas, such as Harborside Terminal, would not be included in the redevelopment program. Other areas would be subject to rehabilitation or clearance, depending on feasibility, including the large industrial plants between Morgan and Second Streets, the goal being more efficient reuse of plant or land. Because of the importance to the railroads of the land between Second and Twelfth Streets, operations would not be disturbed. However, the potential for air rights development for commercial and residential uses will be analyzed. The area to the north of Twelfth Street will not be analyzed in any detail, since its future will be largely dependent on the success of the proposed redevelopment program just to the south, and on the future needs of the Erie-Lackawanna Railroad.

The area between Second and Twelfth Streets, comprising some 250 acres, is owned by the Penn Central and Erie-Lackawanna Railroads. While neither railroad is in the financial position to develop their air rights, both





CROSS-SECTION of the New Jersey shoreline at two locations

have stated their willingness to donate these rights for major development in a joint venture.

Three factors require that this 10 block area between Second and Twelfth Streets be given special attention for residential and commercial development: its central location in relation to mass transportation; its riverfront location and view of Manhattan; and the sparsity of existing development. Further, the area is adjacent to the Henderson Street Urban Renewal Area, which is soon to be under construction for residential and commercial uses, and to the Hamilton Park Area, a residential community soon to be rehabilitated.

For purposes of analysis, it is estimated that densities of 150 dwelling units per gross acre would be developed, and will consist mostly of high-rise apartment structures. Though this density may seem high when compared to either St. Johns' or Gregory Park apartments, it is quite low in comparison with such projects as Battery Park City where densities of 300 dwelling units per acre are planned in a setting far more attractive and with more usable open space than the Jersey City examples. In addition, these densities do not reflect the fact that an additional 40 percent of the project area would be devoted to open space and parks.

Although demand for commercial office space is presently at a low point, long-range projections for future demand made by the Regional Plan Association show a marked increase that could have major repercussions in Jersey City, especially on the waterfront. The proposals for the study area therefore include approximately 8 million square feet of office space. This is an arbitrary figure which could be expanded or contracted depending upon actual future need, but it can provide a guide as to the financial effect of providing office space in the development program.[17]

Subdivision of the total area, using imaginative site planning and design, and providing for a separate level for vehicular movement, would assume approximately:

40% of land area for apartments	100 acres
40% of land area for parks and open space	100 acres
10% of land area for office buildings (50% of land coverage allowed)	25 acres
10% of land area for commercial space	25 acres
	250 acres

Public buildings such as schools, police stations, and libraries could be developed in the residential structures, thus, reducing the amount of land covered by buildings.

At a density of 150 dwelling units per acre, approximately 15,000 units could be constructed on 100 acres. This could create apartments for 45,000 people, or about sixth of the city's population.

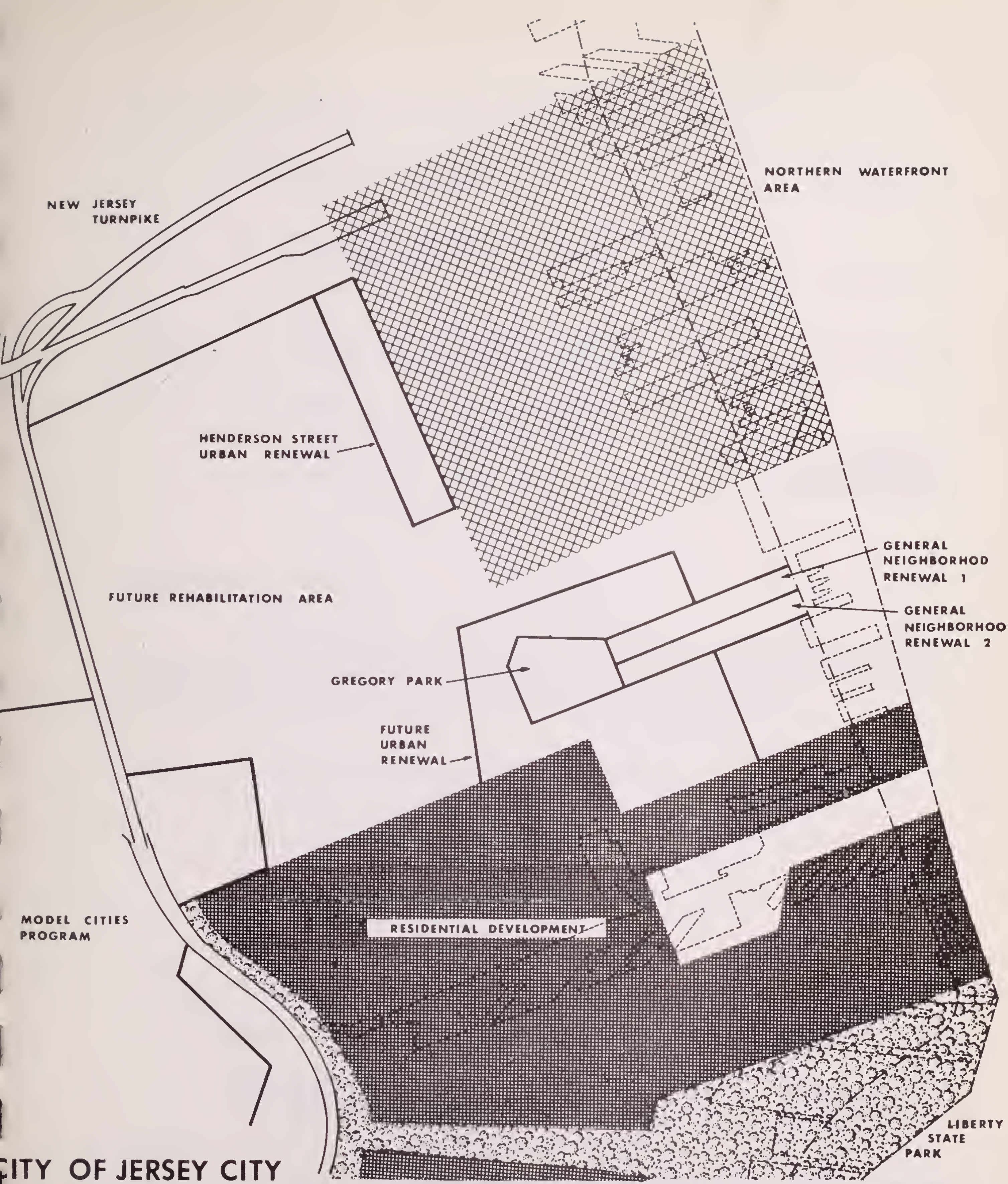
For analytical purposes the following assumptions are made:

1. Of the 250 acres comprising the project site, only 100 acres will be platformed; the remainder of the project will be developed on ground level where either the railroads or private owners can release property.

2. The cost of the platform will be borne by the developers of the office space. To compensate this group for the additional cost, tax abatement will be allowed for the number of years required to pay off the additional debt for the platform (20 years). The net savings to the developers of the office space as a result of this procedure will be approximately $1.9 million annually. Though the city will be drastically reducing its annual tax revenue from this portion of the project, $22.5 million vs. $9.6 million with tax abatement, the return will still be quite attractive, given the limited amount of outlay required of the city for office space development.[18]

Real estate taxes based on $81 per $1,000 of full assessment	$81 x $280,000	=$22,500,000
Alternate tax: 15% of gross receipts	15% x $64,000,000	=$ 9,600,000
GROSS SAVINGS TO DEVELOPER		$12,900,000
Annual cost of platform: 8%-20 year amortization of $150,000,000		$12,000,000
NET SAVINGS TO DEVELOPER		$ 900,000

Development costs for the entire project can be broken down into four specific areas: construction of platform, office space, housing, and provision



CITY OF JERSEY CITY

NORTHERN WATERFRONT

scale in feet
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10

of capital improvements on the part of the City of Jersey.

A. Construction of platform 100 acres @ $1,500,000/acre	$ 150,000,000
B. Construction of office buildings 8,000,000 square feet @ $35 per square feet	$ 280,000,000
C. Construction of housing 15,000 units @ $40,000 per dwelling unit	$ 600,000,000
D. Capital outlays on the part of the city for schools, parks, police stations, etc.	$ 50,000,000
Total Project Cost	$1,080,000,000

Phase One of Project

The first phase of the project would involve the construction of the platform and office buildings with a total cost of $430 million, cash investment of $60 million, and annual office rentals of $64 million.

Total annual costs for office space are:

Principal and Interest on Office Buildings 20 year mortgage at 8% interest	$22,400,000
Principal and Interest on Platform 20 year mortgage at 8% interest	$12,000,000
Taxes	$ 9,600,000
Insurance	$ 1,500,000
Utilities and Maintenance, Other	$ 6,000,000
Contingencies	$ 1,000,000
Total Annual Cost (approximate)	$52,500,000

With annual revenues amounting to $64 million, 8 million square feet x $8 per square foot, and expenses totalling $52.5 million, the annual return

to the developer would amount to $11.5 million, or approximately 20.8 percent of invested capital of $60 million.[19]

Phase Two of Project

The second phase of the project would involve the construction of housing, with related capital outlays on the part of the City of Jersey City. Construction costs for 15,000 dwelling units at $40,000 per unit would amount to $600 million. Investment on the part of the city for utilities, parks, schools, and the like will amount to approximately $50 million.

For purposes of this study, several situations related to housing development will be studied.

One possibility is residential development with no tax subsidies or other benefits to the developer. Under these circumstances the city would derive annual tax revenues of $48.6 million, based on an assessment of $81 per $1,000 of value (600 million dollars total value). Capital outlays on the part of the city would amount to approximately $50 million. Amortization of the $50 million cost through the issuance of bonds for varying time periods ranging from 20 to 70 years at an interest rate of approximately 7 percent results in annual expenses of from $4.7 to $2.5 million. Thus the net return to the City of Jersey City, after an additional deduction for operating expenses-schools, garbage collection, police, etc. -- of $10 million would range from approximately $33.9 million to $36.1 million annually, depending on the method of financing the city's capital improvements for the project.

The above analysis, however, has not considered revenues, costs, and profit margins to the developer; that is, the economic feasibility of developing housing in the study area. Total cost of development amounts to $600 million, which when amortized over a 20 year period at 8 percent after an initial cash investment of $120 million (20% of project cost) results in annual payments of $44 million for principal and interest.

Total annual costs would be:

Principal and Interest	$ 44,000,000
Taxes	48,600,000

Insurance	$ 2,700,000
Maintenance, Utilities, Other	7,850,000
Total Cost (approximate)	$103,150,000

Assuming a 13 percent rate of return on invested capital of $120 million, a developer would have to derive approximately $15.6 million in profits each year; with expenses totalling $103.1 million, revenues would therefore have to be about $118.7 million annually. Annual revenues of $118.7 million breakdown to a per room rental of approximately $165 per month.

15,000 dwelling units x 4 rooms per unit = 60,000 rooms

$$\frac{\$118,700,000}{60,000} = \$1978 \text{ per room per year or } \$165 \text{ per room per month}$$

Residential Development with Tax Subsidies or Other Benefits to Developer and Residential

Estimates of the Department of Housing and Urban Development reveal, however, that the market for apartments with rentals in excess of $80 per room is relatively small, approximately 15% of total need. Therefore, to make this project feasible, various alternatives involving subsidies would have to be introduced to reduce the per room rental cost. These subsidies include the FHA 236 program under which mortgages for 40 years at 1 percent interest can be obtained by limited-dividend and non-profit groups, the New Jersey HFA programs allowing for 40 year mortgages at 6 percent interest for limited-dividend and non-profit groups, and a 15 percent gross receipts tax in lieu of real estate taxes for limited-dividend and non-profit groups. The chart which follows outlines the types of subsidies mentioned and the resulting reductions in per room rentals.

RESIDENTIAL RENTALS

	Scheme A Full Tax Paying	Scheme B Non-profit Corp.	Sceheme C Limited-Dividend Corp.
Total Annual Costs	$103,100,000	$103,100,000	$103,100,000
Less: savings on interest and principal payments based on 236 program (1% interest for 40 years)			
$44 million - $14 million = $30 million		30,000,000	
		73,100,000	
savings on real estate taxes using 15% gross receipts method			
$73.1 million + $7.2 million = $80.3 million			
$80.3 million x 15% = $12 million			
$48.6 million - $12 million = $45.4 million		36,600,000	
OR			
savings on interest and principal payments based on H.F.A. state program (6% interest for 40 years)			
$44 million - $31 million = $13 million			13,000,000
			90,100,000
savings on real estate taxes using 15% gross receipts method			
$90.1 million + $7.2 million = $97.3 million			
15% x $97.3 million = $14.6 million			
$48.6 million - $14.6 million = $34 million			34,000,000
Net Annual Cost	$103,100,000	$ 36,500,000	$ 56,100,000
Profit at 13% return	+ 15,600,000		
Limited-Dividend Corporation - 6% return			(included in above figures
Non-profit Corporation		7,200,000	
Total Annual Revenue	$118,700,000	$ 29,300,000	$ 56,100,000
Annual Room Rental	$ 1,978	$ 498	$ 935
Monthly Room Rental (based on rooms)	$ 165	$ 42	$ 78

In addition to these subsidies, the Federal Rent Supplement Program can be applied to reduce rental costs. Under this section of federal housing legislation, as previously outlined, The FHA will make payments to the owner of the development in the amount of the difference between the actual rent and 25 percent of the tenant's income within given limits. The rent supplement cannot be more than 70 percent of the actual rent, and presently applies to 40 percent of the units developed. Under the rent supplement program the $42 per room under Scheme B can be reduced to $30 (25% x $5,900/48 = $30) with the federal government paying the $12 per room per month difference to the owner for 40 percent of the units developed. In addition, the $78 per room rent under Scheme C can be reduced to $30 per room with the federal government paying the $48 per room difference for 40 percent of the apartments under the rent supplement program.

In the final analysis all three schemes would be necessary to insure a reasonable return to the developer, to provide housing for a broad range of income groups and to provide tax revenue to the City of Jersey City.

A. 15% of units developed under Scheme A, with no subsidies. (15% x $48,600,000) 2,250 units at $165 per room	$ 7,300,000
B. 40% of units developed under Scheme B, FHA 236 program. (40% x $12,000,000) 6,000 units, with 2,400 units at $30 per room and 3,600 units at $47 per room	$ 4,800,000
C. 45% of units developed under Scheme C, HFA program. (45% x $14,600,000) 6,750 units with 2,700 units at $50 per room and 4,050 units at $93 per room	$ 6,600,000
Total Tax Revenue	$18,700,000

Thus, with total revenue amounting to $18.7 million, and expenses ranging from $14.7 to $12.5 million, depending on the method of financing, the City of Jersey City would obtain a profit of between $4 and $6.2 million annually with the development of housing on the northern portion of the Jersey City waterfront. To this net income should be added net revenue from the Commercial aspect of the project amounting to $9.6 million and existing tax revenues of $3.4 million, resulting in total net tax revenues of $18 million annually.

REVENUES TO THE CITY

1. Tax Revenue from office buildings	$ 9,600,000
2. Tax Revenue from apartment buildings	$ 5,000,000
3. Tax Revenue from railroads and existing industrial activity	$ 3,400,000
Total Net Revenue	$18,000,000

The development of a residential, commercial, and industrial community on a series of levels with approximately 45,000 residents, 50,000 workers in office space, and an additional 10,000 industrial workers will, in addition to providing tax revenue, create many unquantifiable benefits. These include the multiplier effect on increases in the overall city productivity as a result of the buying power of 15,000 additional family units and 60,000 workers, the social benefits resulting from the provision of new housing to replace substandard units and provide additional new housing, as well as the importance of the overall fiscal position of the city and its waterfront image.

Conclusion

The residential, commercial and industrial development proposed is essential to an overall plan for the Jersey City waterfront, given the shortage of housing and jobs in the area and the city's need to improve its fiscal position. The strategic location of the area under study in relation to existing residential sectors of the city, urban renewal areas, and mass transportation facilities, as well as economic benefits to the city make the proposed program most appropriate for the area. The aesthetic value of locating the new residential-commercial center on the waterfront with excellent views of the Manhattan skyline and the Hudson River are final factors pointing to the multi-use development of the area.

LAND USE PLAN

INTRODUCTION

The purpose of the preceding sections of this report has been to establish a rational and realistic basis for formulation of a comprehensive plan for optimum development, and redevelopment, of Jersey City's Hudson River waterfront. The plan is, of necessity, based on existing major developments, projects in various stages of planning and future growth potential and alternatives.

The Comprehensive Plan has major four goals:

...To provide new and expanded sources of employment to the citizens of Jersey City;

...To provide a stable, revenue-producing tax base for the City;

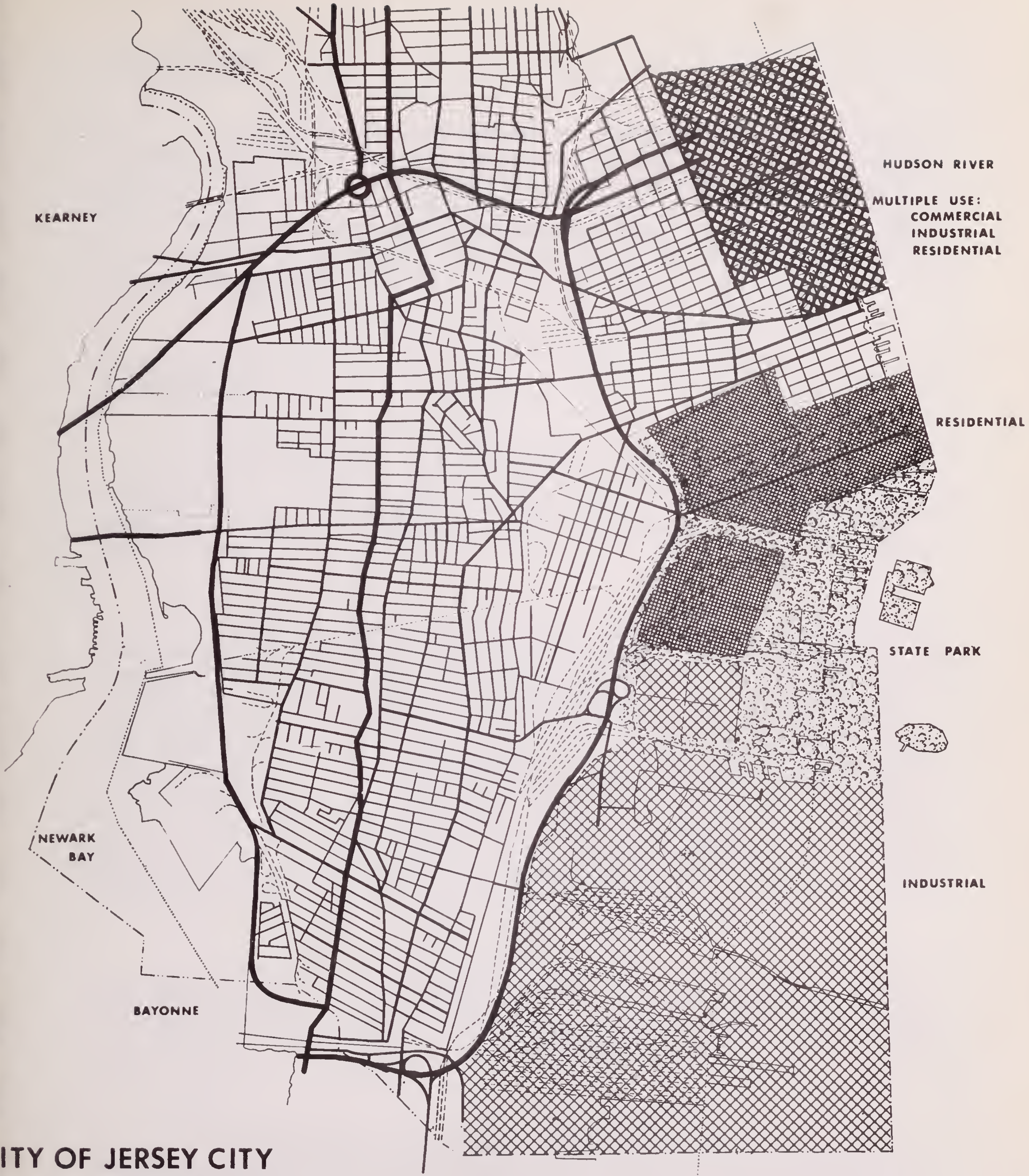
...To provide a high quality and wide range of housing choices for the City's residents and others in the metropolitan area;

...To improve the image and aesthetic appeal of the waterfront.

In order to attain these goals, the objective of the Plan is to create, on vacant, underutilized, and, in some cases, submerged land, a new community of residential, industrial, commercial and recreational land uses. It is anticipated that the greatest part of this new community will be developed through private efforts, although certain aspects of the project will be undertaken through Federal, State, quasi-public and, in some cases, municipal efforts.

The Comprehensive Plan for Waterfront Development is not intended to be a rigid plan from which there can be no deviation. Rather, this plan represents a dynamic program translating social, economic, and aesthetic factors into an action-oriented plan for change. It represents a comprehensive effort to reverse the trend of the past 35 years of deterioration and stagnation, and to define a new relationship between Jersey City and its waterfront.

The Comprehensive Plan for Waterfront Development is divided into three major parts: Land Use Plan, Circulation Plan, and Community Facilities Plan.



CITY OF JERSEY CITY

PROPOSED LAND USE

11

LAND USE PLAN

The Comprehensive Plan calls for four major types of land use or activity; residential, industrial, and recreational areas, as well as a multiple use area. These land use categories are proposed on the basis of a combination of factors, including the pressing social need for new housing and additional jobs in a city with severe deficiencies in both, the economic potential of specific uses, and, finally, the compatibility of proposed uses with existing and planned development.

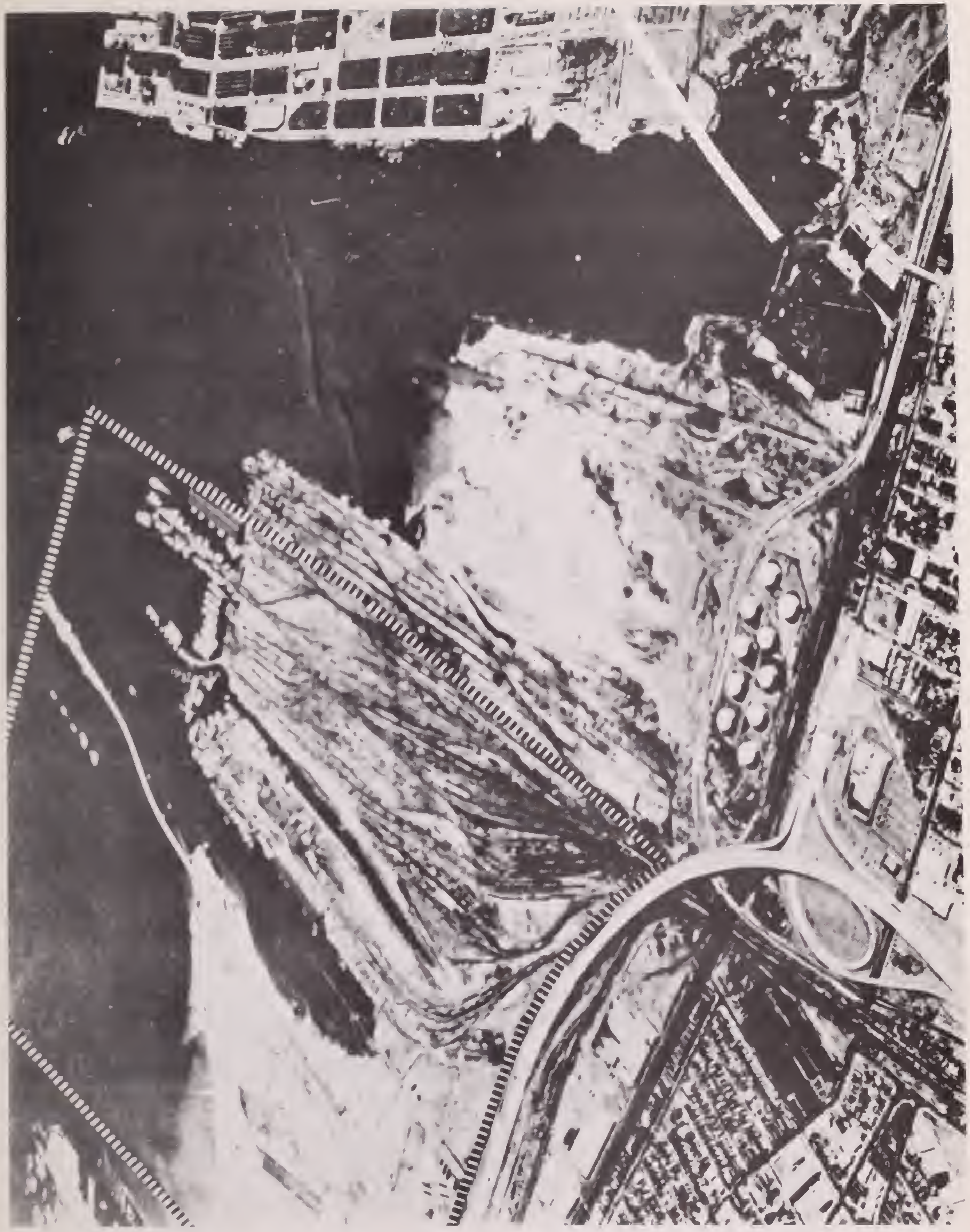
Industrial Uses

Industrial uses are proposed for the portion of the waterfront from the Bayonne city line up to, and including, Liberty Industrial Park. This area is characterized by a not inconsequential amount of new industrial development, by a soon-to-be-vacated military installation, and by vast areas of underutilized railroad yards.

There are two new projects in this portion of the waterfront which will have a major influence on any new development: Liberty Industrial Park and the Port Jersey Complex. Both have been privately financed, both are sources of significant amounts of employment and tax ratables to the City, and both are examples of clean and non-noxious type industries which, it is hoped, will attract others to this portion of the waterfront. Liberty Industrial Park is located at the northern edge of the proposed industrial area, on a site of approximately 180 acres, a portion of which was reclaimed from tidal lands. At full development it will employ around 1300 people. Major uses are warehousing and light manufacturing. Port Jersey occupies a 410 acre site (of which 310 are reclaimed lands). Presently under construction, Port Jersey will contain warehousing and light manufacturing as well as containerized shipping operations.

There are two or three major sites in this region for large scale industrial development which the Plan envisions: The Greenville (Penn Central) and Claremont (Lehigh Valley) railroad yards, the 217 acres of Caven Point Army Terminal, and an adjacent 312 acre site (underwater) owned by the City of Jersey City.

A major feature of the Plan is a requirement for consolidation of all waterfront activities of the Penn Central, Lehigh Valley, and Jersey Central railroads at a single location; thus releasing large, underutilized acreage for in-



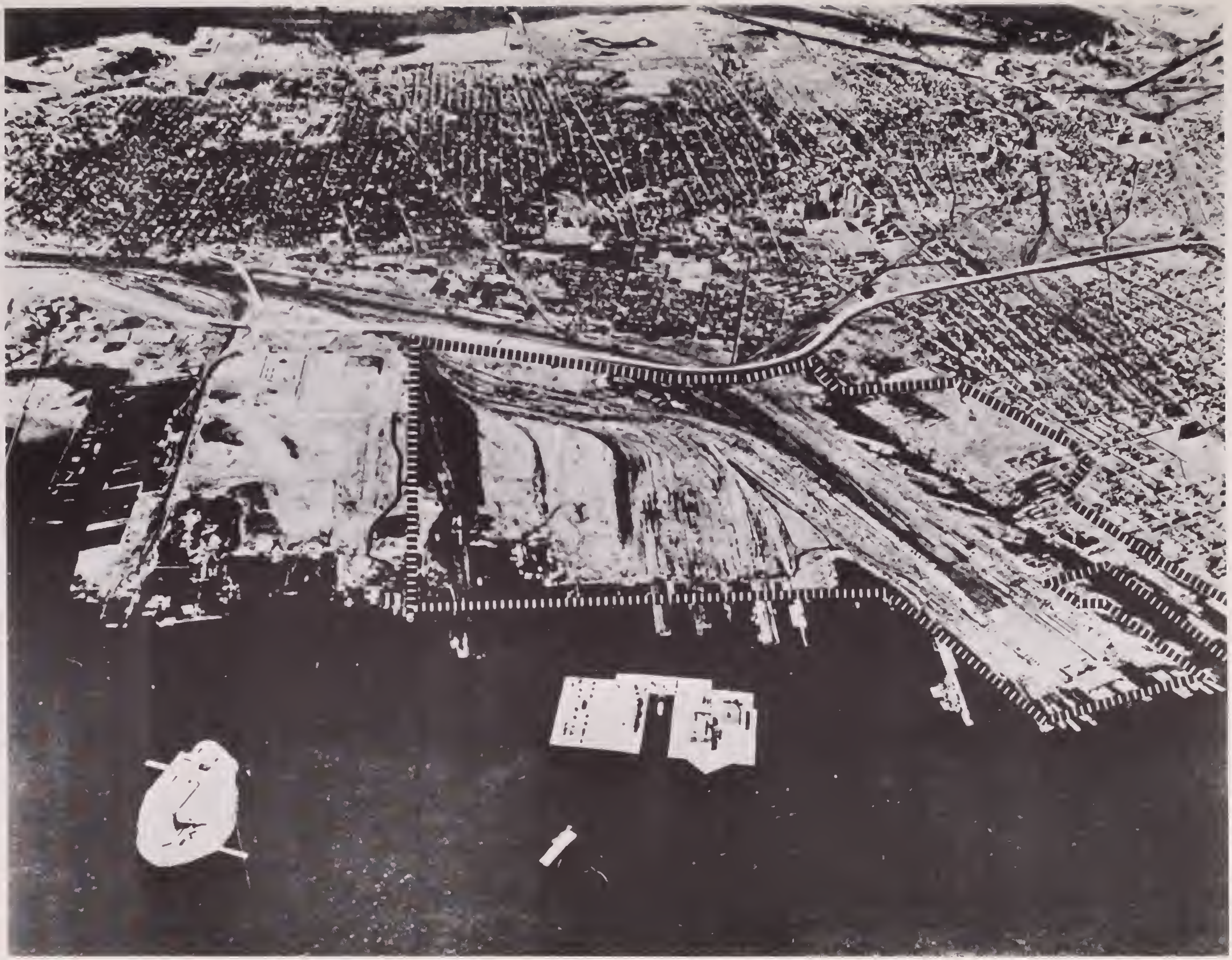
PROPOSED 1 100 ACRE INDUSTRIAL PARK

dustrial and other development. There are numerous governmental and bureaucratic obstacles to such a consolidation, but assuming these obstacles can be overcome, the most logical site for a coordinated rail yard would be the Greenville Yards of the Penn Central Company. Access to this yard would be no problem for the Lehigh Valley, since it shares the Penn Central right-of-way on the Newark Bay approach. A relatively simple realignment of the Central Railroad of New Jersey could provide access to the Greenville Yard for that railroad.

The remaining prime location for industrial development is composed of two major parcels: (1) that portion of Caven Point Army Terminal which will be released by the General Services Administration, and (2) an adjacent parcel of city-owned property. Together these two sites would provide in excess of 600 acres of prime water frontage for industrial development. Preceding sections of this report have analyzed various development alternatives for the site, including residential uses. The conclusion was, however, that industrial development would be most appropriate for the site. Such development should include warehousing, light manufacturing, and containerized shipping operations. The latter element, however, probably should not be constructed initially, but should be undertaken when lease agreements have been signed or when demand for container facilities has shown a marked increase. Construction of the remainder of the project could proceed, and if container operations are shown not to be feasible, the warehousing and light industrial aspects of the project could be expanded.

In order to fully utilize the site, most of the 312 acre city-owned portion must be filled. Because of a rock shelf running across the center of the area, the fill operations would have to create a square-shaped site enclosing the rock formation. The peripheral area surrounding the filled site could provide up to 10 berths, with suitable back-up space for containerized shipping, while the remainder of the site could be used for warehousing and light industrial activity.

Remaining vacant or underutilized areas on the southern waterfront are well suited for industrial activity because of their strategic location near deep water channels, rail lines, and the New Jersey Turnpike, and because of their location within the "free trucking zone". The presence of large flat areas capable of providing appropriate square footage for plants, parking, and loading, and the compatability with existing uses makes the remaining developable areas on the southern part of the Jersey City waterfront well suited for industrial use.



PROPOSED AREA FOR RESIDENTIAL COMMUNITY AND STATE PARK

Residential Uses

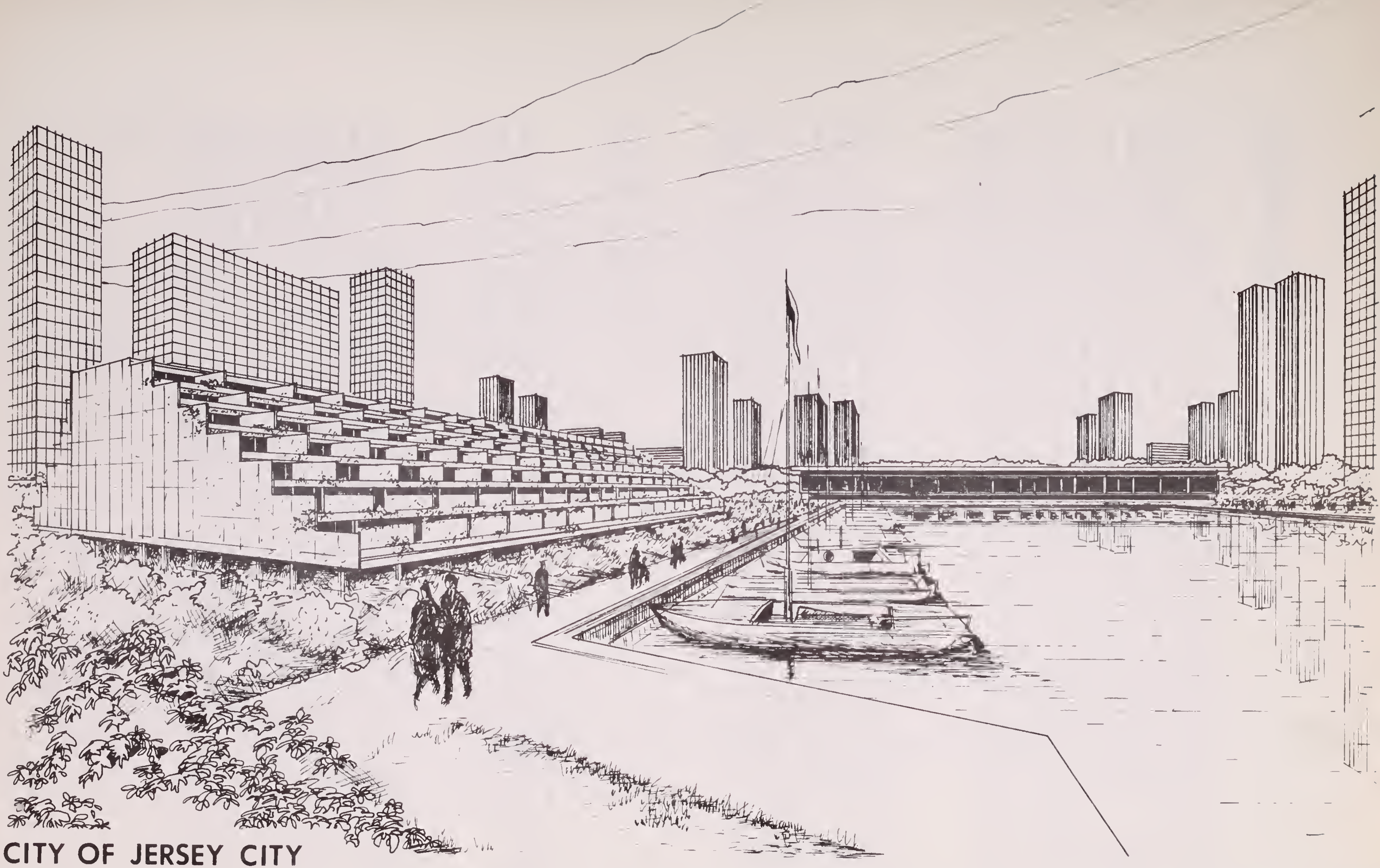
The Comprehensive Plan for Waterfront Development calls for the creation, at full development, of a residential community with up to 19,000 dwelling units for approximately 70,000 persons, with an overall maximum density of 100 dwelling units per acre. This residential area, comprising some 650 acres, is bounded on the north by Grand Street, on the west by the New Jersey Turnpike, on the south by James A. Hamill Drive and on the east by the proposed Liberty State Park and the Hudson River. The area, of which the Morris Canal Basin is part, is characterized by large tracts of flat vacant land with scattered industrial and ancillary activities concentrated adjacent to the Basin, and by extensive yard and trackage areas of the Central Railroad of New Jersey and the Lehigh Valley Railroad throughout most of the remainder of the site.

Of this acreage, State and local governments own approximately 44 percent, including the most accessible and potentially productive parcels. Since much of the area proposed for residential development is vacant, problems of relocation are minimal. Large sectors of the site are within minutes of developed areas of the City and within several blocks from PATH (rapid transit to New York) stations at Grove Street and Exchange Place. Because of its accessibility, central location and aesthetic potential, the site is ideal for residential development.

While there are no specific proposals or site plans for residential development in this area, it is assumed that subdivision of the site in accordance with accepted planning principles would assume approximately:

15% of land area for streets	91 acres
30% of land area for buildings	190 acres
20% of land area for parks	125 acres
10% of land area for commercial	62 acres
10% of land area for schools	62 acres
5% of land area for sidewalks	30 acres
12% of land area for basin	80 acres
	640 acres

While the above figures should be used for guidelines, it is hoped that imaginative site planning and site design will be used so that additional open space and other features can be provided.



CITY OF JERSEY CITY

PERSPECTIVE OF RESIDENTIAL COMMUNITY AT TIDE-WATER BASIN

Recreational Uses

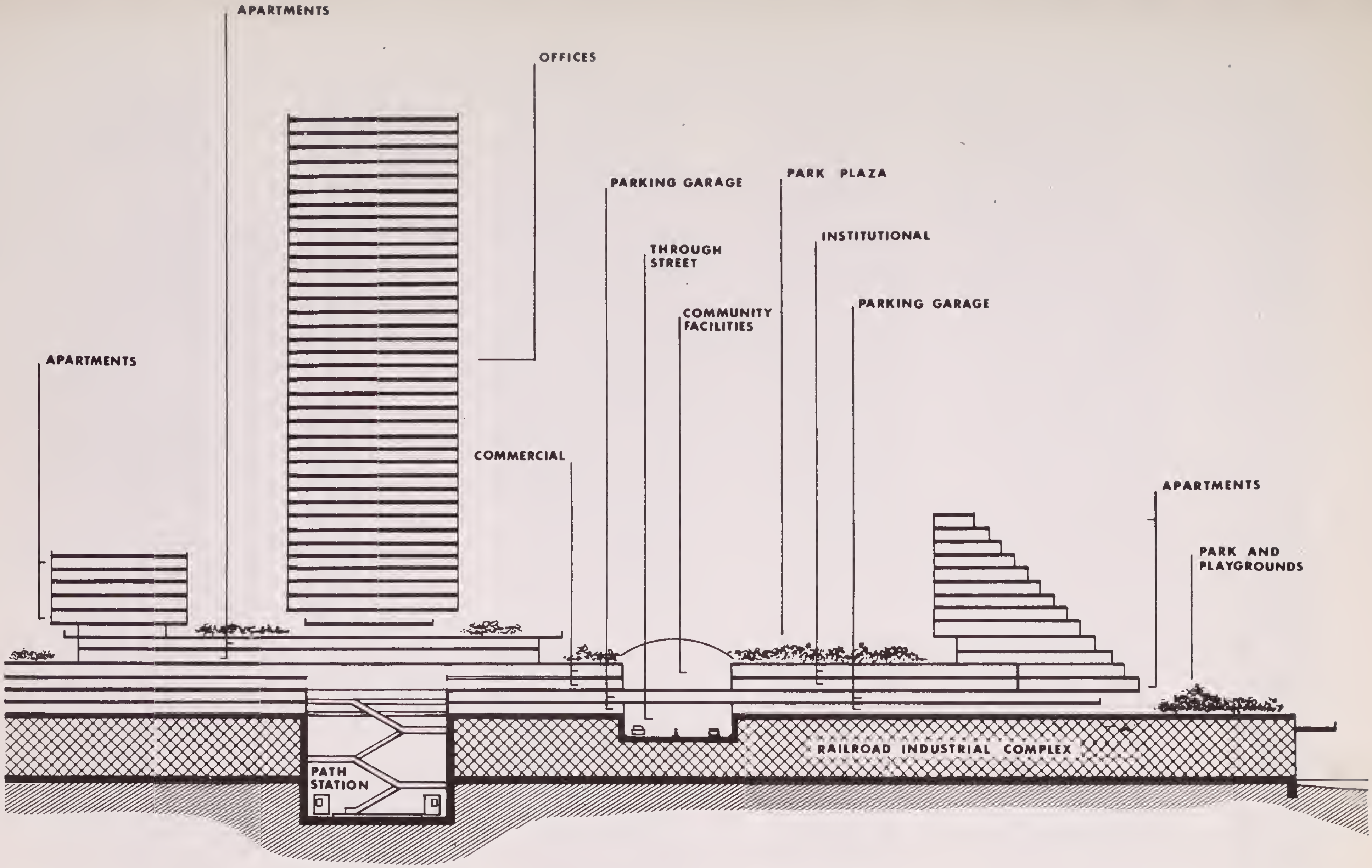
The primary recreational use incorporated into the Waterfront Plan is the proposal by the State of New Jersey for the creation of Liberty State Park. This project, for which preliminary planning is under way, extends from just south of the Morris Canal Basin behind Ellis and Liberty Islands, to the former piers of the National Docks Railway. Much of the land has been assembled and is in State or City ownership, but adequate relocation of the Jersey Central railroad activities is a key factor in assembling the remainder of the parcels. Originally to be funded through the State's "Green Acres" program, development has been slowed because of depletion of Green Acres funds. However, the public referendum for urban park funds passed in the recent election will give Liberty State Park high priority.

The State Park will serve the residential development around the Morris Canal Basin site, but its primary intent, and focus, will be to serve the region and entire metropolitan area on a scale too broad for simple, neighborhood functions. It is the intent of the Plan, however, to integrate the Park with the residential development adjacent to it as much as possible, perhaps by running "fingers" of one development into the other, and coordinating open spaces and public areas of the residential community with adjacent areas of Liberty State Park.

Multiple Use Area

The Comprehensive Plan proposes for the portion of the waterfront north of the Morris Canal Basin a district composed of integrated residential, commercial, and industrial uses. The proposals for this area include three distinct "neighborhoods" in the downtown waterfront area.

The first of these neighborhoods is Exchange Place--traditionally the heart of downtown Jersey City. The plan proposes no radical changes in land use here, but concentrates on more intensive use of this valuable land. The downtown waterfront area, including Exchange Place, is part of the Paulus Hook Urban Renewal Area. The project area contains approximately 165 acres, and will be executed in successive stages of a Neighborhood Development Program (NDP). NDP I, presently under way, consists of the completed First Jersey National Bank building and an adjacent 15 story headquarters of the Ukrainian National Association, now under development. Construction is due to start in the near future on an apartment building (308 units), and a 21 story office building. All



CITY OF JERSEY CITY

CONCEPTUAL ELEVATION FOR MULTI-USE PROGRAM AT PAVONIA STATION

13

of these buildings are on the north side of Montgomery Street, between Hudson and Warren Streets. The area on the opposite side of Montgomery Street, is in planning, and will contain uses similar to, and compatible with the NDP I project.

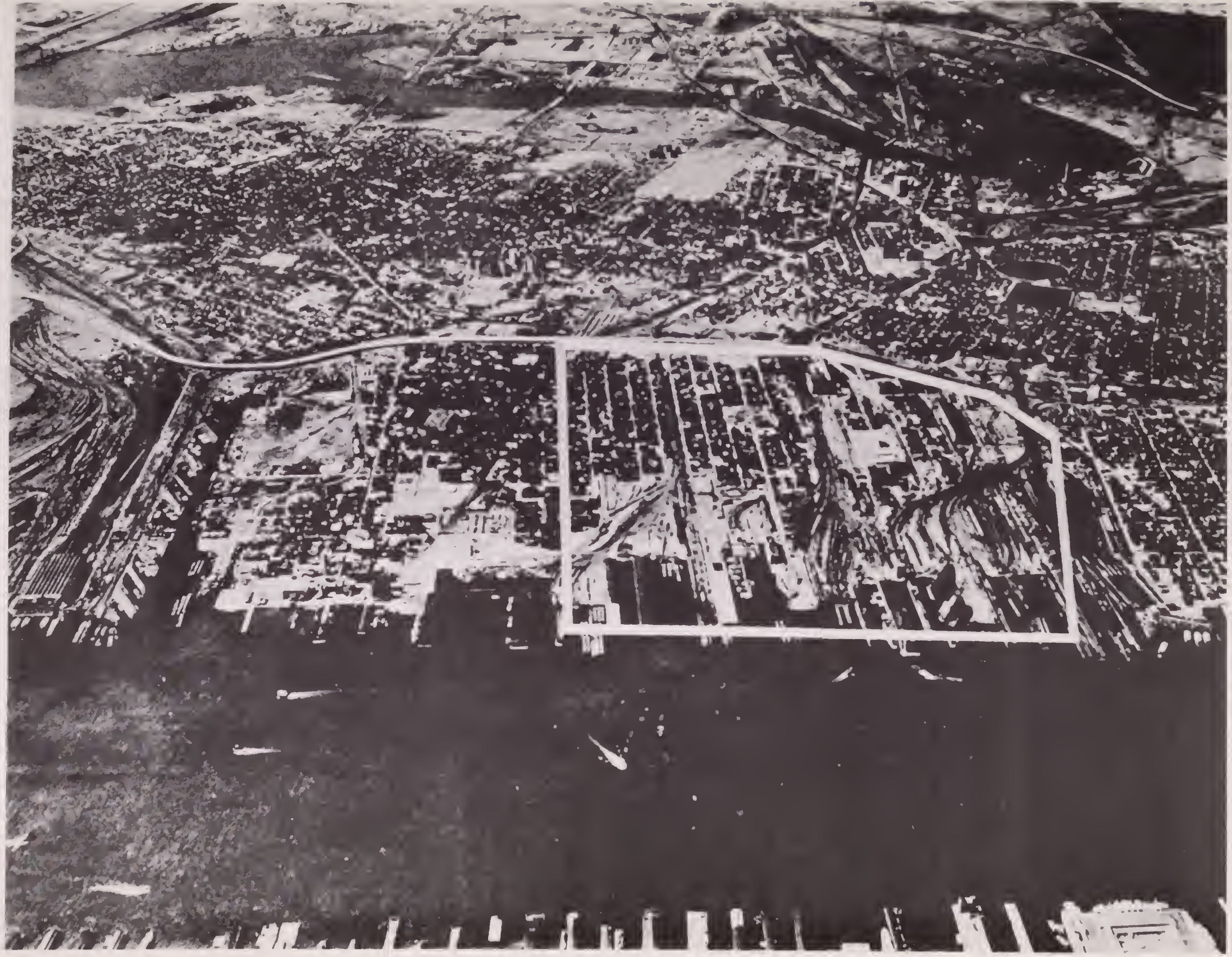
Since large sectors of the northern waterfront are being used to different degrees of intensity, relocation and redevelopment presents a problem. In some cases, redevelopment is clearly unnecessary. But for those areas that are underutilized and in dilapidated condition redevelopment is essential. It should be noted that the underutilized areas are strategically located in relation to mass transit (at Pavonia Avenue), and centrally located for both land and sea access. Furthermore, because of the river-edge location, they have a high aesthetic value.

Development programs for this part of the waterfront are extremely complex, given the viability of some existing industrial uses and certain railroad functions, and their apparent incompatibility with possible residential or commercial uses. Some areas will not be included in redevelopment programs; other areas will be rehabilitated or cleared, with the goal of more efficient reuse of plants or land.

The area of most intensive redevelopment is a site of approximately 200 acres, between Second and Twelfth Streets, owned by both the Penn Central and Erie Lackawanna Railroads. Three factors require that this area be given special attention for residential and commercial development: (1) its central location in relation to mass transportation, (2) its riverfront location and skyline view of Manhattan, and (3) the sparsity of existing development. Further, the area is adjacent to the Henderson Street Urban Renewal Area, and to the Hamilton Park section, a residential area soon to be rehabilitated.

It is estimated that residential densities of 150 dwelling units per gross acre will be developed, and will consist primarily of high-rise apartment structures built on platforms over existing railroad yards. Although these densities may seem high, it should be pointed out that approximately 40% of the project will be devoted to open space and parks.

Although demand for commercial office space is presently at a low point, long range projections for future demand made by the Regional Plan Association show a marked increase that could have major repercussions on the Jersey City waterfront. The proposals for this area therefore include several million square feet of commercial office space. Subdivision of the total 10 block



NORTHERN WATERFRONT AREA

area would assume approximately:

...40% of land area for apartments	100 acres
...40% of land area for parks, open space	100 acres
...10% of land area for office buildings	25 acres
...10% of land area for commercial space	25 acres
	250 acres

At a density of 150 dwelling units per acre, approximately 15,000 units could be constructed on 100 acres. This could create apartments for about 45,000 people. Of the 250 acres comprising the project site, only 150 acres would be platformed; the remainder of the project would be developed on ground level where either the railroads or private owners can release property.

CIRCULATION PLAN

The Circulation Plan recognizes that before a development program of the magnitude envisioned by the Land Use Plan can be undertaken, there must be many major improvements to the circulation system along the waterfront.

Highway Circulation

Highway access to that portion of the waterfront below the Morris Canal Basin is virtually non-existent. There is no access road running north to south, and the intermittent access roads from west of the Turnpike, almost without exception, require passage over narrow, limited-load, obsolete bridges.

Ideal highway circulation along the waterfront requires three different types of streets or highways: arterial roads, feeder roads, and local roads.

A major arterial road must be built to serve the entire waterfront area. It should extend from Route 169 (Bayonne) northward, roughly paralleling the New Jersey Turnpike. Adequate access should be provided to the Turnpike interchanges at Bayonne and at Bayview Avenue. The road should be four lane, undivided, with no development of any sort having direct access or frontage except through feeder streets.

Because of the density of existing development it would be prohibitively expensive to swing a new road through downtown Jersey City; the Plan therefore recommends the improvement of Grand Street from its intersection with the new arterial road (near the Grand Street ramp to the New Jersey Turnpike) to Grove and Henderson Streets. Grove Street would become one-way south-bound, and Henderson one-way northbound. This arrangement would facilitate free access from all points on the waterfront to the Holland Tunnel, Pulaski Skyway, and points in northern New Jersey.

The pattern of feeder and local roads to serve the waterfront will depend, in part, upon some existing roads, but primarily on the physical pattern of development which takes place on the waterfront. Examples of existing roads which serve the feeder purpose are Statue of Liberty Road, James A. Hamill Drive, and Edward Hart Road, all of which facilitate movement to and within Liberty Industrial Park. New feeder and local roads will be built to meet the traffic movement requirements of the new industrial development at Caven Point and Liberty State Park and elsewhere on the waterfront.

Though no detailed specifications are proposed for highway circulation the following principles will be followed:

1. Separation of vehicular and pedestrian traffic in densely developed sections of the project, mainly residential and commercial office areas.

2. Installation of roads by the developer with the help of the city in obtaining grants and loans through state and federal public improvement programs.

3. No road development along the Hudson River edge that would block direct waterfront access from residential sections of the project unless appropriate bridges are provided.

4. Provision of parking in garages to be located in residential and commercial structures; only limited amounts of street and surface parking will be allowed.

Mass Transportation

Jersey City will require facilities for mass transportation to serve the residential development ultimately planned for its waterfront. The provision of such facilities will be most crucial in the residential area around the Morris

Canal Basin. The Exchange Place development will use the PATH stations at Grove Street and Exchange Place, while the residential office development in the northern waterfront will use the Pavonia Avenue station.

It is possible that in the foreseeable future the PATH system will be expanded to provide access from mid - and downtown Manhattan to Newark Airport. The City will encourage PATH officials to construct the extension by way of the Jersey City Waterfront, Liberty State Park and Bayonne, connecting into the PATH main line at the Grove Street Station. (It is possible that even if the Airport connection is routed over existing lines to Newark, the PATH system may be extended to Bayonne). Should neither of these routes become a reality, some form of feeder service to Grove Street and/or Exchange Place must be provided to development at the Morris Canal Basin. More than likely, this service would take the form of express shuttle bus service between the development and the PATH stations.

Ferry and hydrofoil service has been mentioned as a possibility both to serve Liberty State Park from the Battery in Manhattan, and to connect the various parts of Gateway National Seashore (of which there is a remote possibility that Liberty Park may be part). If this service were to use the Morris Canal Basin as its western terminus, it could also provide an alternative form of mass transit to lower Manhattan for area residents.

Community Facilities

Because of the general nature of this plan, and because the scope of the Plan is long-term, it is not possible at this time to provide a detailed community facilities plan. It should be stated, however, that as development proceeds, municipal services (schools, police and fire protection, and the like) will be expanded correspondingly. The following points are important in relation to community facilities. Wherever possible, efforts will be made to include community facilities in the residential or office structures so that they will not needlessly occupy valuable open space. In addition, the cost of community facilities will be borne by the developer with the City of Jersey City providing incentives for the additional costs undertaken by the sponsors.

STAGING & IMPLEMENTATION

METHODS OF IMPLEMENTATION

The various methods of implementing the waterfront program are best analyzed in terms of the goals and objectives of the Waterfront Plan. These are first and foremost to create a source of increased revenue for the city by attracting industry and commerce to the waterfront, to provide quality housing for the city and to improve the overall imageability of the area.

In order to attain these goals, the Plan's objective is to create on vacant, underutilized, and in some cases, underwater land, a new community of residential, industrial, commercial and recreational land uses. Various development strategies are available to accomplish this objective, including authorities, urban renewal, private development and in certain limited instances, non-profit sponsorship.

Liberty Industrial Park and the Port Jersey Development on the southern border of the waterfront are recent successful examples of industrial uses which have developed privately. However, the difficulty in getting the railroads to release land to private developers except where it is deemed surplus, the scattered ownership of remaining private parcels, as well as the cost of land reclamation and development, work against the chances of the two developments cited attracting others to the area except perhaps in the Caven Point area.

> "It is estimated from analysis of present tax records that the approximately 3300 acres of waterfront land are divided into 453 parcels of separate ownership. Parcel sizes vary significantly with some containing hundreds of acres and others less than one tenth of an acre. The city, state and the railroads generally have large parcels of land while private ownership is mainly in small parcels. For example, the railroads have an estimated 125 parcels for a total of 1,400 acres accounting for 28 percent of all the parcels on the waterfront but almost 50 percent of the total land area. On the other hand, private ownership of land amounts to only 10 percent of all the waterfront acreage but accounts for almost 60 percent of the total number of parcels.
>
> The condition of the buildings and lands along the waterfront are generally poor... There are large areas with railroad, loading, docking and other improvements which have become dilapidated due to lack of upkeep and maintenance over the years and can be considered obsolete in many of today's industrial operations. Also, large areas are used for junk and scrap storage which can generally be considered an underutilization of the land. Still other areas of unimproved vacant

> land exist along the waterfront which, due to location, with much of the land under water or in marsh with poor access and lack of facilities, have not been in the past and are not likely to be developed in the future through private enterprise."[20]

Further, the type of activities likely to be attracted to the waterfront in the absence of comprehensive action would continue to be low taxed and unsightly uses such as the "junk and scrap storage" facilities mentioned. The goals of revenue and imageability could not be attained.

Development Strategies

Authorities

An authority is a Public Benefit Corporation under the Public Authorities Act of the State. New Jersey, like most states, passes enabling acts to authorize the creation of authorities by county and municipal governments. In the case of municipalities, the Mayor, as head of the governing body, appoints the commissioners of the authority. This agency is then empowered to issue bonds for a specific amount and purpose and is subject certain restrictions. The authority is empowered to construct a specific project and to operate and maintain it until all the bonds of the authority are amortized. After amortization, the authority goes out of existence and the ownership of its property is transferred to the municipality in which it functioned.

The single most frequent reason for the creation of authorities is that instead of being bound by the municipal debt limit -- which many local governments, including Jersey City, have already exceeded -- the new authority is free to "issue its bonds from time to time at its discretion for any of its corporate purposes" and further, that these bonds, "shall not constitute an indebtedness within the meaning of any constitutional or statutory debt limitation or restriction."[21]

The flexibility allowed by revenue bond financing enables authorities to develop a project without any burden on the taxpayers since all costs are met by user charges.

A seeming inflexibility of authorities is evident in the fact that they are "empowered to construct a specific project" and limited to purposes

specified by law (re: Jersey City Parking Authority, Jersey City Sewer Authority). Clearly, for comprehensive planning of the waterfront all the facets of development must become the authority's single function. Since the authority is limited to the purposes specified by law, the enabling legislation need only be made broad enough to encompass waterfront development and the "specific project" issue is obviated.

The Port of New York Authority is the most obvious example of an authority with one comprehensive function: the port, with projects ranging from office buildings to transportation. This is the result of the broad language contained in the laws of the two states that established the Authority;

> The states of N.Y. and N.J. on the 13th of April, 1921... did enter into a compact or agreement which pledged the two states to faithful cooperation in the future planning and development of the port of New York... (and) created the Port of New York Authority, a body politic and corporate, as an instrumentality or agency of the two states to effectuate such pledge of cooperation.
> ...The Port of New York Authority is hereby vested with all necessary and appropriate powers not inconsistent with the constitution of the U.S. or of either state, to effectuate the same.

Authorities have the advantages of greater flexibility than municipalities in debt scheduling, personnel and budgeting. Their revenues are raised from bond financing without obligation to the municipality and these bonds are self-liquidating through user charges. An authority is also able to apply for federal grants for public improvements. In addition, as an extension of the public sector, "the Port Authority is a direct state agency, exercising an essential function, and is, therefore, an alter ego of the state."[22] An authority has certain other powers not available to private enterprise: eminent domain and tax exemption.

These advantages must be weighed against the authorities' negative aspects. The first obligation of an authority is to its bondholders, who may be scattered throughout the country or the world, and not to the municipality in which it functions. In theory, after the bonds are retired, usually forty years, the authority goes out of existence and its property reverts to the municipality. In practice, however, the terminal date may be postsponed indefinately through floating new bonds. Surplus funds of the authority may not be tapped by the city, even where city agencies or

departments are engaged in the same functions.

But most crucial in terms of the goals of the Jersey City Waterfront Plan is the loss of tax revenue from the tax-exempt property of the authority. The authority would be engaged in luring industry, housing and commercial facilities to the waterfront, but once there, such uses would be immune from taxation. Authorities do pay set sums of money to municipalities in lieu of taxes, but compared to tax revenues, these sums have been minimal. One method to rectify this situation is to make the "set sum in lieu of taxes" higher. The problem here is the determination of how high a sum is high enough? New York City, in setting up an authority to construct and operate the Shea Stadium complex, pegged the fixed yearly sum to be paid to the city at what it considered a reasonable level. However, the popularity of the events there, as reflected by paid admissions and parking revenues, has made the "set sum" seem far too low. Having learned from this experience, the authority that is being planned to own and operate Yankee Stadium will pay a sum to the city based on a sliding scale. As revenues increase so does the sum which the authority must pay to the city.

A sliding scale of payments tied to increases in revenue and property valuation on the waterfront is a necessity if Jersey City establishes an authority to carry out development. Otherwise one of the main goals of the project will be thwarted.

Urban Renewal

Urban Renewal enables cities to use eminent domain to assemble large and small tracts of land under multiple ownerships for new public and private development.

An urban renewal area must be a blighted, deteriorated or deteriorating area or an open land area which is approved by HUD as appropriate for an urban renewal project. The HUD Urban Renewal Handbook sets up eligibility categories which must be used to determine whether or not an area such as the waterfront qualifies as an urban renewal project. These categories consider the present character of the area, the extent of present development and the proposed reuse. The character, development and proposed reuse of the waterfront places this area under either of two categories with the accompanying limitations and conditions.

Category	Present Character of Area	Extent of Present Development	Proposed Reuse	Limitations Conditions
VI Non Residential Exception	Not Predominantly Residential	Predominantly Open Land	Not Predominantly Residential	A&B
XII Area Redevelopment Exception	Not Predominantly Residential	Predominantly Open Land	Not Predominantly Residential	A&F

Limitations and Conditions A, B, and F are defined as follows:

A. For projects consisting of predominantly open land, the LPA* must submit evidence that the land substantially impairs or arrests sound community growth and that there is no reasonable expectation that the land will be constructively utilized through private action.

B. The governing body of the LPA must determine by resolution that the redevelopment of the area for predominantly nonresidential reuse is necessary for the proper development of the community.

F. To be eligible as a Section 113 area redevelopment exception project, the area must be:

  (a) Located in an area designated as a redevelopment area pursuant to Section 5 of the Area Development Act, for which the Department of Commerce has certified that there is a reasonable probability that with assistance provided under that Act and other undertakings the area will be able to achieve more than temporary improvement in its economy.

  (b) One for which the first contract for Federal financial assistance was executed on or after May 1, 1961.

In addition, the Housing and Urban Development Act of 1970, Title VII, Section 741, expands the definition of an "urban renewal project" beyond the scope of the 1949 Act by exempting vacant, underused or inappropriately used land from the proviso that it be a "slum" or a physically "blighted area". As such this provision could further insure the eligibility of the Jersey City waterfront development under urban renewal.

Section 741 (b) permits,

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* Local Public Agency

> ...The acquisition by a local public agency of land or space which is vacant, unused, underused, or inappropriately used, if the Secretary determines that the land or space may be developed - at a reasonable cost, without major residential clearance activities, and with full consideration to the preservation of the beneficial features of the urban and natural environment - for housing low-and moderate-income groups. These uses could include schools, hospitals, parks, essential public facilities, and all uses associated with new communities in town or similar large scale undertakings related to inner city needs including sources of employment.

Assuming then that sections of the waterfront are eligible as an urban renewal project, the advantages and disadvantages of this method of implementing the plan are:

Advantages;

a. Eminent Domain - the legal mechanism that allows the LPA to obtain tracts of land for the purpose of selling them to developers.

b. Federal Grants - the federal government supplies grants toward the net project cost on a 2/3 - 1/3 basis, (3/4 - 1/4 if Jersey City qualifies as an Economic Development Area).

c. Non-Cash Grants - the local grant-in-aid (1/3 or 1/4) may be in cash or equivalent. Thus, needed public improvements may constitute the city's share.

d. Land Writedown - the essence of urban renewal, permits the sales price to the private developer of the prepared land to be below the gross cost of land preparation.

The advantage in terms of the goals of the waterfront plan with respect to private development under urban renewal is clear. The city would enjoy full tax revenues from the developed land.

Disadvantages;

a. The city's share of the cost of the project must be met by floating urban renewal bonds. The city must pay off these

bonds out of general revenue, thus adding additional pressure on the existing budget. The last such bonds were floated at 7.9%. The city already has $915,000 worth of urban renewal bonds outstanding from existing urban renewal projects. Although these bonds, like authority bonds, fall outside the city's debt limit, unlike authority's bonds they are the obligation of the city.

b. Excessive red tape, long waiting periods for applications and funding, and the subsequent long lead time involved before the execution state all exist.

c. No more than 35% of the Federal Grants may be devoted to non-residential uses.

Private Development

The greatest advantage of private development is the full tax revenues that would accrue to the city and the likelihood of quick development. But as noted, given existing conditions on the waterfront this type of development is not likely to occur without some form of additional assistance except perhaps in such key locations as the southern waterfront.

Non-Profit Development

If a group were formed to develop selected portions of the waterfront on a non-profit basis, it is not clear that this method of development could achieve the goals of the plan. For example, two years ago New York City formally received possession of the 265-acre Broolyn Navy Yard from the federal government and leased it to a non-profit corporation called CLICK (Commerce, Labor, Industry Corporation of Kings County).

> ...Plans were already being developed for turning the area into an industrial park. In May, 1969, John A. Davis, Jr., the chief executive of CLICK was so confident about the yards future that he predicted it would provide 5,000 jobs by the end of 1970.
> ...Those deadlines have passed and Mr. Davis has moved on to another job in Houston, but the 2,200 jobs now filled are short of CLICK's goal of 5,000.

> ...CLICK's financial status also is not up to its own expectations. The corporation posted a $200,000 loss in 1970 and has lost $75,000 so far this year.[23]

The Jersey City waterfront would offer an even more formidable challenge to a non-profit corporation, in both size and scope of the project, than did the Brooklyn Navy Yard.

However, a non-profit or limited dividend corporation might be able to sponsor selected aspects of the development plan. Successful limited dividend housing projects include Gregory Park in Jersey City and, on a much larger scale, Co-op City in the Bronx.

The United Housing Foundation, sponsors of Co-op City, successfully converted an underutilized 300 acre site into 15,400 housing units for 50,000 people with related commercial, recreational and institutional uses.

In addition to the procedures outlined, the Housing Act of 1970 creates within HUD a Community Development Corporation. This Corporation will provide planning and financial assistance for public and private new community development. (A new community development for purposes of this act is not just the traditional "new town." It also includes, as would be the case with the Jersey City waterfront, "major new-in-town developments to help renew central cities, including the development of areas adjacent to existing cities for an increase in their tax base.")

Under the CDC, both public and private developers would receive guarantees of their obligations for land acquisition and development --100 percent guarantees for public developers and up to 80 percent of land value and 90 percent of improvements for private developers. In the case of public developers, guarantees would be made only where their borrowing was not tax-exempt; in such cases, the Corporation would provide grant assistance to make up the difference between the market interest rate on the obligation (with the guarantee) and the tax exempt rate. In addition, the Corporation extends loans to both public and private developers to cover their interest payments for up to 15 years, as needed, until land sales are sufficient in volume to permit repayment without assistance.

These, and additional points of the legislation are summarized below.

Housing and Urban Development Act of 1970

Sec. 712

- Major new town-in-town developments to help renew central cities.

Eligibility:

- The new community must,

a) provide an alternative to disorderly growth

b) be economically feasible

c) contribute to welfare of surrounding area

d) be consistent with comprehensive plans for area

e) be approved by state and local government

f) have balanced and diversified land use and be served by adequate public and commercial facilities

g) make substantial provision for low- and moderate-income housing

h) use advanced technology

Structure:

- Creates within HUD a "community development corporation."

Sec. 713 Guarantees:

- The CDC is authorized to guarantee and enter into commitments to guarantee the bonds, debentures, notes and obligations of private new community developers and state land development agencies (including state and local public bodies or agencies) in amounts not exceeding the difference between interest paid on such obligations and the interest on similar obligations, the income from which is exempt from federal taxation. The maximum outstanding principal obligation guaranteed to a single new community is $50 million.

Sec. 714 Loans:

- available for assisting a new community to make interest payments on indebtedness with up to 15 years to repay. Loans for a single new community shall not exceed $20 million.

Sec. 715 Public Service Grants:

- CDC grants to the state or local public body having responsibility for providing essential services to a new community during the first three years.

Sec. 718 Supplementary Grants for Public Facilities:

- the Secretary is authorized to make supplementary grants to any state or local public body or agency carrying out a "new community assistance project." In no case shall a supplementary grant exceed 20 percent of the cost of the project for which the grant is made and in no case shall the total federal contributions made be more than 80 percent of the cost of the project.

A "new community assistance project" is a project assisted by grants under existing federal legislation. However, new monies for these programs have been authorized under this act.

Authorizations for appropriation of supplementary grants for public facilities are $36 million for fiscal year 1971 and $66 million for each of the fiscal years 1972 and 1973. In addition, the amount authorized for supplementary grants ($30 million) under title IV of the Housing and Urban Development Act of 1968 would be available under this section.

Supplementary Grants for Public Facilities

Eligible New Community Assistance Project	Federal Legislation	% Grants and Uses
a. Urban Mass Transit Facilities	Sec. 3, Urban Mass Transportation Act of 1964	Up to 66 2/3% of net project cost, for buses, rolling stock, real and personal property.
b. Open Space, Urban Beautification	Title VII, Housing Act of 1961	Up to 50%, for acquisition and development of parks and open space.
c. Roads (other than interstate)	Sec. 120 (a) of Title 23, U.S.C.	50% for highway research, design, right-of-way, construction and relocation assistance.
d. Medical Facilities	Title VI of Public Health Service Act	Up to 2/3 grants for costs of construction and equipment. Also loans in lieu of grants, with up to 40 years to repay at low interest.
e. Public Libraries	Title II of the Library Services and Construction Act	Matching funds on a percentage basis according to per capita wealth, for acquisition of land, architect's fees and new construction.
f. Lands and Water for Recreational Purposes	Sec. 5, Land and Water Conservation Fund Act of 1965	Grants on a matching basis for planning, acquiring and developing all types of outdoor recreation areas and facilities.
g. Neighborhood Facilities	Sec. 703, Housing and Urban Development Act of 1965	2/3 of development cost, 3/4 in redevelopment areas, for new construction, expansion or rehabilitation of existing structures.

Supplementary Grants for Public Facilities, cont'd.

h. Basic Water and Sewerage Facilities	Sec. 702 of Housing and Urban Development Act of 1965	Up to 50%, for construction of basic water and sewer facilities, excluding sewerage treatment.
i. Sewer Treatment Works	Sec. 8, Federal Water Pollution Control Act	Grants from 30-60%, depending on state contribution, for construction of waste treatment works, including intercepting and outfall sewers.
j. Academic Facilities	Sec. 103 and 104, Higher Education Facilities Act of 1963	Up to 50% of development cost of public community colleges and technical institutes.
k. Public Works	Sec. 101 (a) (1) of the Public Works and Economic Development Act	Grants and loans to acquire, develop and construct public works facilities in an EDA designated area.

Sec. 720 Planning Assistance

- The Secretary is authorized to provide financial assistance up to two-thirds of the total planning cost to private new community developers and state and local public land development agencies. Such assistance will be provided only to new community developers meeting the Secretary's feasibility criteria; $5 million is presently authorized for appropriation under this section, with $5 million in additional authorizations on July 1, 1971.

- These funds are available only after a new community development program has met initial feasibility criteria and is being actively considered for approval. However, under Sec. 727 of the Act:

> Sec. 701 of the Housing Act of 1954 would be amended to enable official goverment planning agencies to receive planning grants in connection with new communities before the new community has been finally approved, thereby making timely planning possible. New communities would also be made eligible under the provisions in Sec. 701 which now authorize three-fourths planning grants for several categories of comprehensive planning by State and local public bodies.

Authorizations

The total new authorizations for funds provided under Title VII of the Act, Urban Growth and New Communities, are as follows:

Planning Grants	$ 10,000,000
Supplemental Grants for Public Facilities (1971-73)	168,000,000
Loans on Interest Charges	240,000,000
	$418,000,000

In addition, the Act guarantees the bonds for the development of the major elements of the new community.

STAGING PROGRAM

The Waterfront Development Plan can become a reality only if careful consideration is given not only to what uses are to be included but what methods and staging are used in their implementation. Three distinct development areas are proposed on the waterfront. These areas are, first, Caven Point which includes the 217 acres of United States Army land, the adjacent 312 acres of city owned property as well as approximately 490 acres at the Greenville Yards; second, the Tidewater Basin, some 650 acres of land north of Liberty Industrial Park and third, an area on the northern waterfront from Second to Twelfth Streets.

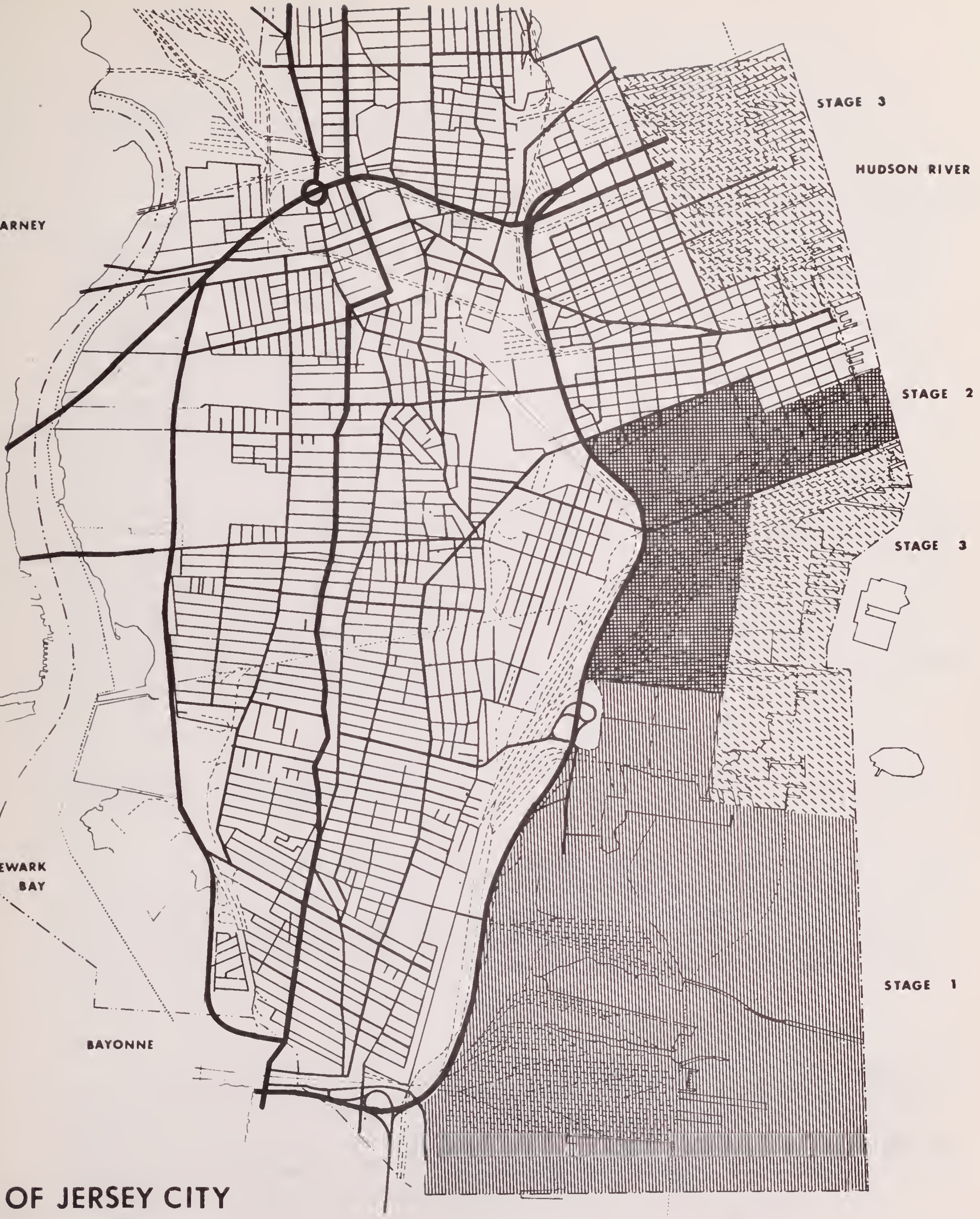
Phase One - Caven Point, City Owned Land and Greenville Yards

The City of Jersey City as coordinator for the acquisition of the Caven Point property, declared surplus by the Department of Defense, will in the near future take title to the 217 acre tract. This property along with the existing 300 acres of city owned land as well as the 490 acre Greenville Yards soon to be sold by the Penn Central Railroad will thus provide approximately 1,100 acres of prime waterfront property for development.

The nature of the site -- large, open, flat areas -- and its location near the New Jersey Turnpike, with the existence of several deep water channels, rail links and the "free trucking zone" -- make the area well suited for industrial use. In addition, the proximity to Liberty Industrial Park and Port Jersey would allow for compatable land use development. Thus from the point of view of both site requirements and compatibility with existing land uses, industrial development would be most advantageous on the southern portion of the waterfront.

Given the ideal location for industrial development of the area, potential consolidated ownership of the entire site in the near future and high level demand for industrial space, the 1,100 acre site must logically receive priority in waterfront development.

The City of Jersey City will not only benefit in terms of direct tax revenue possibly in excess of $10 million annually, but indirectly from the multiplier effect of creating several thousand new jobs. The tax revenues from the project would not only defray part of the existing city deficit



CITY OF JERSEY CITY

STAGING PROGRAM

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but could aid in developing other portions of the waterfront.

For purposes of implementing the development of the 1,100 acre site, two factors must be stressed; speed and revenue to the city. Since urban renewal is slow and requires some residential reuse under revised statutes and since eminent domain is not needed, urban renewal may be dismissed as a strategy for implementing the development of the southern portion of the waterfront. The two realistic alternatives are private development and the establishment of an industrial development authority. If the city sells the land to private interests, the sales contract must include stipulations regarding uses, square footage to be developed, timing and public improvements. If the city can maximize the potential of these stipulations it will then benefit both from full tax revenues and the speed with which private enterprise can develop a site. These benefits can be assured by declaring the southern portion of the waterfront an Industrial Planned Unit Development area in its new zoning ordinance. An authority could also develop the site rapidly and the city would not have to meet the cost of public improvements and supporting facilities. However, as previously noted, the property of an authority is tax exempt. Whether development by an authority would be beneficial is dependent on the amount of revenue to be provided the city. The "set sum in lieu of taxes" would have to be substantial enough to equal the long term revenue advantages of private development.

Phase Two - Tidewater Basin

The Tidewater Basin area presents a more complicated picture than that of the 1,100 acres to the south given the multiplicity of ownerships. The largest land holders are the City of Jersey City, the State of New Jersey, the Central Railroad of New Jersey and the Lehigh Valley Railroad. These group holds over 80 percent of the land with the remainder in private ownership.

The Central Railroad of New Jersey has requested that liquidation proceedings be instituted. While this seems unlikely, reorganization and consolidation will no doubt take place. The Lehigh Valley Railroad is in receivership and no doubt will also undergo reorganization and consolidation. Thus, a certain amount of time is required to determine the outcome of these proceedings and the future land requirements of these railroads.

The location of the Tidewater Basin adjacent to the proposed

Liberty State Park with excellent views of the Hudson River and Manhattan skyline, as well as the existence of mass transit, the New Jersey Turnpike and proximity to residential areas including renewal and rehabilitation projects, make the site ideal for residential development. This determination is confirmed by interest already expressed in constructing up to 1,000 housing units on a portion of the site by private developers.

The time required in working out the problems and needs of the railroads, providing the proper framework for residential development including removal of unsightly structures, providing access and firming up the proposed state park proposal all point to development of the Tidewater Basin region as the second phase.

In terms of implementing the development of the site, the major problem is assembling the land in the face of the reluctance of the railroads to commit themselves to future disposition of their property. The outcome of the city's attempt to blight railroad property on the waterfront is crucial. If the railroad property is blighted then the city may use its power of eminent domain to secure the land for urban renewal. Should this attempt to declare railroad property blighted fail, urban renewal still offers the means to develop the site through provisions of the Housing and Development Act of 1970. Title VII, Section 741 expands the definition of an "urban renewal project" beyond the scope of the 1949 Act by exempting vacant, underused or inappropriately used land from the proviso that it be a "slum" or a physically "blighted" area, subject to the conditions already noted in this report.

Thus urban renewal would make the land available for development with the brunt of the land preparation costs borne by the Federal government. While the city would have to float urban renewal bonds for its share of the net project cost, its overall economic position would be greatly improved at such time as a result of tax revenues from the industrial development of the southern portion of the waterfront. Also, the city's share of the project cost could be reduced by obtaining supplementary grants for public facilities under the "new communities" section of the 1970 Housing Act. The land writedown provisions of urban renewal as well as existing federal housing regulations would, given the high costs of housing construction, be necessary tools to attract developers whether they be a profit, non-profit or quasi-public group. It would at the same time insure the development of an economically and socially mixed residential community.

Phase Three - The Northern Waterfront

The Erie-Lackawanna and the Penn Central Railroads are the two major landholders on the northern part of the Jersey City waterfront. Unlike other parts of the waterfront, the city is not presently a major land owner in this northern section. The area is generally more intensively developed than areas south of the Tidewater Basin. In addition to the railroad's freight operations, there are meat packing and freezing plants and scattered pockets of residential development.

The site's location near mass transit, with excellent views of the Manhattan skyline, and the adjoining residential and commercial rehabilitation and renewal projects indicates a strong potential for high rise residential and office uses. Because of the importance of Harborside Terminal, railroad activity and other existing industrial uses, these are envisioned as continuing, with redevelopment taking place in the air-rights.

Because this section of the waterfront is more intensively used, present programs of renewal and rehabilitation for the area will take some time to complete, and because proposed redevelopment will be especially costly due to platforming, development must be postponed for the final phase of waterfront development. In addition, since a major element in assuring the success of redevelopment on the northern waterfront is the construction of office space, the project cannot receive priority consideration given the overabundance of office space just moments away in Manhattan.

Although revenues to the city will be substantial from the first two phases of waterfront development, the high costs and complexity of developing the northern waterfront would require capital outlays well beyond the capacity of the city or even private development. However, an authority, financed by revenue bonds with additional public aid, would be a most appropriate method for implementing the northern waterfront plan. Besides floating bonds, the authority would be able to take advantage of the loans, grants and mortgage guarantees available as a result of the Housing Act of 1970 for new communities. The authority would first develop the office space using the revenue from this aspect of the project to finance the costs of the housing and other development proposals. Again, it is imperative that the city receive sufficient amounts in lieu of taxes from the authority to insure that this method of developing the area meets the goals of the City of Jersey City.

SUMMARY OF WATERFRONT PROGRAM

As the Hudson River flows into New York Bay, the landscape adjoining the river is marked by extreme contrast. On the eastern shore is the powerful skyline of lower Manhattan's office buildings; to the west, the remnants of a once thriving industrial area now characterized by rotted piers, half submerged barges, abandoned rail lines and obsolete loft buildings.

The City of Jersey City is presently unable to take full advantage of its strategically located waterfront. A proliferation of ownerships, lack of long range policy on the part of the railroads towards their property, efforts of speculative interests and, most important, the City's failure to take comprehensive action have resulted in less than optimal development on the waterfront.

The Comprehensive Waterfront Plan, recognizing the strategic location of the area under study in terms of water, rail and highway access, the presence of the mass transit Path system and the relatively vacant nature of the area, proposes massive development of the approximately 3,000 acre Jersey City waterfront. The proposals are not arbitrary nor are they the result of wishful thinking; rather they represent concrete proposals that are economically feasible both to the prospective developer and the City in terms of revenues and jobs.

Three distinct development areas are proposed on the waterfront based on realistic timing, economics and priorities. These three areas are, first, Caven Point which includes the 217 acres of United States Army land, the adjacent 312 acres of City owned property as well as approximately 490 acres at the Greenville Yards; second, the Tidewater Basin, some 650 acres of land north of Liberty Industrial Park and third, an area on the northern waterfront from Second to Twelfth Streets.

Phase One - Caven Point, City Owned Land and Greenville Yards

The City of Jersey City as coordinator for the acquisition of the Caven Point property, declared surplus by the Department of Defense, will in the near future take title to the 217 acre tract. This property along with the existing 300 acres of city owned land as well as the 490 acre Greenville Yards soon to be sold by the

Penn Central Railroad will thus provide approximately 1,100 acres of prime waterfront property for development.

The nature of the site -- large, open, flat areas -- and its location near the New Jersey Turnpike, with the existence of several deep water channels, rail links and the "free trucking zone" -- make the area well suited for industrial use. In addition, the proximity to Liberty Industrial Park and Port Jersey would allow for compatable land use development. Thus from the point of view of both site requirements and compatibility with existing land uses, industrial development would be most advantageous on the southern portion of the waterfront.

Given the ideal location for industrial development of the area, potential consolidated ownership of the entire site in the near future and high level demand for industrial space, the 1,100 acre site must logically receive priority in waterfront development.

The City of Jersey City will not only benefit in terms of direct tax revenue possibly in excess of $10 million annually, but indirectly from the multiplier effect of creating several thousand new jobs. The tax revenues from the project would not only defray part of the existing city deficit but could aid in developing other portions of the waterfront.

For purposes of implementing the development of the 1,100 acre site, two factors must be stressed; speed and revenue to the city. Since urban renewal is slow and requires some residential reuse under revised statutes and since eminent domain is not needed, urban renewal may be dismissed as a strategy for implementing the development of the southern portion of the waterfront. The two realistic alternatives are private development and the establishment of an industrial development authority. If the city sells the land to private interests, the sales contract must include stipulations regarding uses, square footage to be developed, timing and public improvements. If the city can maximize the potential of these stipulations it will then benefit both from full tax revenues and the speed with which private enterprise can develop a site. These benefits can be assured by declaring the southern portion of the waterfront an Industrial Planned Unit Development area in its new zoning ordinance. An authority could also develop the site rapidly and the city would not have to meet the cost of public improvements and supporting facilities. However, as previously noted, the property

of an authority is tax exempt. Whether development by an authority would be beneficial is dependent on the amount of revenue to be provided the city. The "set sum in lieu of taxes" would have to be substantial enough to equal the long term revenue advantages of private development.

Phase Two - Tidewater Basin

The Tidewater Basin area presents a more complicated picture than that of the 1,100 acres to the south given the multiplicity of ownerships. The largest land holders are the City of Jersey City, the State of New Jersey, the Central Railroad of New Jersey and the Lehigh Valley Railroad. These groups hold over 80 percent of the land with the remainder in private ownership.

The Central Railroad of New Jersey has requested that liquidation proceedings be instituted. While this seems unlikely, reorganization and consolidation will no doubt take place. The Lehigh Valley Railroad is in receivership and no doubt will also undergo reorganization and consolidation. Thus, a certain amount of time is required to determine the outcome of these proceedings and the future land requirements of these railroads.

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The Comprehensive Waterfront Plan points out that the waterfront could provide as much as $37 million net in additional tax revenue for the deficit-ridden city. It could create employment for over 50,000 additional people as well as provide approximately 35,000 housing units. These efforts would drastically reduce severe shortages in housing and in job opportunities and at the same time eliminate the economic and functional obsolescence of the waterfront.

FOOTNOTES

1. Class I property consists of main and branch lines
   Class II property is all non-Class I property used for railroad purposes
   Class III property is railroad owned but not used for railroad purposes.

2. "Free Trucking Zone" - An area east of the Hackensack River, from Bayonne north to the George Washington Bridge, where transporters can ship to the five boroughs of New York at rates comparable to those charged by New York City truckers.

3. Industrial space $\frac{150}{1.6} = \frac{1,100}{X}$ acres, X = 11.7 million square feet.

4. 11.7 million square feet X $14 per square foot = $163.8 million.

5. $2.50 per square foot X 11.7 million square feet = $29.3 million, approximately.

6. $216,000,000 X $81/$1,000 of assessed valuation = $16,000,000 tax revenue.

7. $\frac{1.6 \text{ million square feet}}{1,300 \text{ jobs}}$ X $\frac{11.7 \text{ million square feet}}{X}$ = 15,000 jobs

8. 15,000 jobs X $9,000 annual salary = $135 million.

9. Housing Market Analysis for Jersey City, Department of Housing and Urban Development, June 1969.

10. Based on information by Alan M. Voorhees Associates and Alvin E. Gershen Associates.

11. $495,000,000 X $81/$1,000 of assessed valuation = $40 million.

12. The 7% interest may be lower depending on future market rates and the financial position of the city.

13. Formula derived by HUD for determining the maximum base rent required for a family wishing to receive rent supplements.

14. One million square feet of commercial space X $30 per square foot = $30 million.

15. One million square feet of commercial space X $9 per square foot = $9 million annually.

16. $2.4 million from commercial aspect of project + $3.6 million from residential aspect of project = $6 million net. This includes tax abatement for residential portion of project.

17. World Trade Center has 10 million square feet of space - the 8 million square feet proposed could be developed in 5 buildings with from 750,000-1,750,000 square feet each and from 15 to 35 stories in height.

18. It should also be remembered that this special advantage will only run for a maximum of 20 years after which the office development would pay full taxes. In addition, by platforming, the city retains taxes from railroads.

19. High rate of return may well be reduced with an increase in cost of platform.

20. Alvin E. Gershen Associates, Jersey City Waterfront Renewal Plan, page 4 and 5.

21. New Jersey Revised Statutes, Cumulative Supplement, Title 40:11A-6, 8, 10.

22. New Jersey Supreme Court, Miller vs. the Port of New York Authority.

23. New York Times, March 10, 1971.

WATERFRONT RENEWAL PLAN

Unit Cost Data

FILL AND BULKHEADING

Fill	$8/cu. ft.
Piling	12" thick - $6/lf
Site Preparation (includes demolition, clearing, filling, etc.)	$5,000/acre (solid land) $40,000/acre (partial underwater) to $75,000/acre (all underwater)

STREETS AND ROADS

Arterial	2-36' cartways + 20' median	- $220/lf.
Collector	68' cartway	- $175/lf.
Local	40' cartway	- $125/lf.

SEWER AND WATER AND UTILITY

Distribution Lines	$100/lf.
Interceptor Sewer	$230,000/mile
6 MGD Tierciary Treatment Plant	$4,500,000
5 MGD Pumping Station	$150,000

SCHOOLS

$50,000/classroom

RAPID TRANSIT

Tunnel 10 to 100' long	$300-$500/lf.
Escalator	$100,000

PORT COMPLEX

Includes Railroad Tracks, Crane Runway, 4 berths, Transit Shed	$5,432,446

TYPE OF BUILDINGS

Banks	$45/sq. ft.
Department Store	$15/sq. ft.
Factories	$13-$15/sq. ft.
Library	$25/sq. ft.
Office	$35/sq. ft.
Police Station	$30/sq. ft.
Research Lab	$33/sq. ft.
Restaurants	$30/sq. ft.
Warehouses	$12/sq. ft.
High Rise Housing	$25,000 - /Unit

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This report was prepared by Abraham Wallach, with the assistance of Charles Wyatt, Marc Victor and James Gardella.